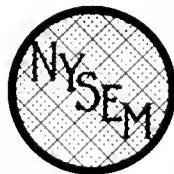


THE NEW YORK SOCIETY OF ELECTRON MICROSCOPISTS

THE  
INTERNATIONAL BIBLIOGRAPHY  
OF  
ELECTRON MICROSCOPY

VOLUME I  
1950 - 1955

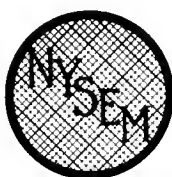


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THE NEW YORK SOCIETY OF ELECTRON MICROSCOPISTS  
2 EAST 63RD STREET  
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## P R E F A C E

This volume of The New York Society of Electron Microscopists' (NYSEM) International Bibliography of Electron Microscopy (IBEM) contains references to the literature published in the years 1950 through 1955. These were first published on edge-notch cards quarterly as they accumulated. References are also included that were found late and have been issued on the cards through June 1958. Republication in book form is intended to make the references again available now that complete sets of the cards have been exhausted and also to facilitate accessibility to the 4,054 references that occupy more than three linear feet in card form.

We have used this republication as an opportunity to check all references against the papers in the NYSEM reprint collection for accuracy of transcription and subject analysis. The whole has been edited for uniformity of style. All known previous errors have been corrected and despite our pains to avoid them, we cannot doubt that some new ones have been created. We shall be grateful for users bringing these to our attention.

The greatest problem in compiling the IBEM has been locating pertinent papers that are characteristically numerous and widely scattered in the total body of the scientific literature. We were fortunate in the performance of this indispensable task to have been able to enlist the assistance of several libraries. We are pleased to acknowledge the cooperation of Thomas P. Fleming and the staff of the Medical Library of the College of Physicians and Surgeons, Columbia University, New York City; Anna M. Sexton and the staff of the Library of the Division of Laboratories, New York State Department of Health, Albany, New York; Jaqueline Felter and the staff of the Library of the Memorial Center for Cancer and Allied Diseases, New York City, with the collaboration of Frances M. Mottram; and more recently the Library of the Institut für Elektronenmikroskopie, Düsseldorf, F.D.R. We have frequently drawn upon the resources of the Libraries of Columbia University and the Library of The Rockefeller Institute, both New York City, in the routine of compiling and editing the IBEM and gladly acknowledge our indebtedness to these institutions.

Two regional efforts on our behalf to attack the search problem at its source merit appreciative mention. The energy of W. Bernhard, Institute de Recherches sur le Cancer, Villejuif (Seine), in bringing the existence and needs of the IBEM

to the attention of French electron microscopists has resulted in a freely flowing stream of reprints from authors of newly published papers. From Switzerland regular collections of reprints from the entire country have been received at one time as a result of the industry of Alain Gautier, Secretary of the Section d'Optique et de Microscopie Electroniques of the Comité Suisse d'Optique. The widespread benefits of these endeavors is self-evident.

We are grateful to the thousands of microscopists who have generously responded to our requests for reprints. These reprints are the raw material from which the IBEM is constructed. They help to assure accurate references and subject analyses. We continue to believe, however, that without being solicited, investigators should promptly submit their reprints for indexing, feeling the same responsibility for securing bibliographic recognition of their work as they do for initially publishing their findings.

The NYSEM and particularly the IBEM were fostered at their inception by The New York Academy of Sciences through its Executive Director, Mrs. Eunice Thomas Miner, whose assistance and counsel are appreciatively recalled.

The IBEM was undertaken with a grant from the Lillia Babbitt Hyde Foundation. During the period that the number of subscribers was growing to the point where the IBEM would become self-supporting, the Hyde Foundation aided with further grants. This and the aid of the following organizations is gratefully acknowledged: Radio Corporation of America, Philips Electronics, Inc., Farrand Optical Co., Optical Film Co., and U. S. Public Health Service (Grant C-2725).

It is a pleasure to mention the following members of NYSEM whose personal contributions at various times have helped to assure the success of the IBEM:

Harry M. Allred  
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Kenneth T. Morse, Bibliographer  
and  
Dan H. Moore, Chairman  
Bibliography Committee  
April 9, 1959

## I N T R O D U C T I O N

Scope This is a bibliography of the world literature on electron microscopy for the use of practicing electron microscopists. We have attempted to include all papers that report or review original research with or upon the electron microscope. Electron diffraction has been excluded, except for papers reporting instrumentation adapting the electron microscope for these studies, and for studies employing parallel diffraction and microscopic examination of specimens. Papers describing other types of microscopy not functioning with visible or ultra-violet have been included.

This first volume of a series of projected cumulations of references published earlier on edge-notched cards contains all references to papers published from 1950 through 1955 that were issued on cards through June 1958. Not intended to supercede the references currently being published on cards, the cumulations on pages, necessarily published after some delay to allow the fullest reporting of the most recent year's references, are a careful reworking of material published in haste previously, in a compact format.

Titles The titles of papers are rendered in the language of publication, except when that language is in a non-Roman alphabet or is a minor western European language. In these instances the title has been translated into English and the language of the original noted in parenthesis. The titles of abstracts are followed by the designation: (Abstract).

Journals The titles of journals have been abbreviated according to the style found first in reviewing the following sources in the order listed: List of Periodicals Abstracted by Chemical Abstracts (Columbus, Ohio), Current List of Medical Literature (Washington, D.C.), and World List of Scientific Periodicals (London, Butterworth).

References A reference consists of author(s), title, and an item number. The item number uniquely identifies a reference in relation to every other reference in the volume, and is the means of identifying the reference in the coauthor and subject indexes. In addition, when the reference is to a book, the place of publication, name of publisher, and year of publication are supplied. When the reference is to a paper in a journal, the abbreviated title of the journal is followed by the volume number, inclusive paging, and month and year of publication: 36:813-5. 9/53.

Arrangement In the body of the work, the references are arranged alphabetically by the name of the first author and then by additional authors if any. Two or more papers by the same author or sequence of coauthors are arranged chronologically by year of publication. Two or more papers by the same author or coauthors and published in the same year are arranged alphabetically by title.

Indexes Authors of works of multiple authorship, who are other than first authors, may be located by means of the Coauthor Index that follows the body of the work and identifies each coauthor's work by its item number. The Subject Index at the end of the volume is a classified list of terms developed by NYSEM for the IBEM. The user should familiarize himself with the entire list before attempting to use any part of it, so that he will be aware of the logical relationship existing between terms.

\* \*



## C O N T E N T S

Preface . . . . .	iii
Introduction . . . . .	v
Author Index . . . . .	1
Coauthor Index . . . . .	145
Subject Index . . . . .	159
General . . . . .	159
Instrumentation . . . . .	159
Techniques . . . . .	159
Biological Applications . . . . .	160
Non-biological Applications . . . . .	164

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ROBERTSON  
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 Anderson, E. 227.  
 Anderson, R. B. 2258, 2259.  
 Anderson, T. F. 712, 1284.  
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 Astbury, W. T. 1771, 2700, 2701, 2702,  
 3703.  
 Atanasiu, P. 2159.  
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 Baas, G. 2943.  
 Bachmann, L. 760.  
 Backus, R. C. 2251, 3915, 3916, 3917.  
 Bahadur, K. 901, 902, 2693.  
 Bahr, G. F. 249, 919, 2620.  
 Bailey, G. W. 678.  
 Baker, R. F. 5, 318a, 1356, 1369, 2718,  
 2719, 2720, 2721, 3762, 3763, 3764, 3765.  
 Baker, W. W. 229, 230.  
 Ball, F. L. 1544, 1544a, 1544b.  
 Banfield, W. G. 2377.

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 Bauer, S. H. 1557.  
 Baumann, J. A. 214.  
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 Bear, R. S. 443.  
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 Beard, J. W. 239, 987, 2439, 3358, 3359,  
 3360, 3362, 3363, 3364.  
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 Bennett, S. H. 876, 877, 878, 879, 880.  
 Berger, G. 3250.  
 Berger, R. E. 3326.  
 Bergold, G. H. 1169, 2455.  
 Bernard, M. 1407, 1408, 1409.  
 Bernard, R. 808.  
 Bernard, S. 279, 280.  
 Bernard, Y. 2412, 2413.  
 Berndt, H. 522.  
 Bernhard, W. 504, 1269, 1270, 1472, 1473,  
 1474, 1475, 2626, 2627, 2628, 2629, 2630,  
 2631, 2632, 2633, 2634, 2635, 3510.  
 Bertaud, W. S. 3385, 3923.  
 Berthold, W. 2559.  
 Bertin, A. R. 3568.  
 Besse, M. 3685.  
 Bessis, M. 61, 223, 2806, 2807, 2808, 2809,  
 2810, 2811, 2812, 2813, 2814, 2815, 2845,  
 2846, 2847, 2848.  
 Beutelspacher, H. 1171, 1172, 1173, 2283,  
 2284.  
 Beutner, E. H. 1548, 1687, 2493, 2494, 2498,  
 2499, 2501.  
 Bhattacharya, D. L. 798, 3332.  
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 Bieseke, J. J. 861, 1394, 1395, 1396, 3327.  
 Bigelow, W. C. 563.  
 Bills, A. E. 2112.  
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 Birch-Anderson, A. 2270, 2438.  
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 Birks, L. S. 3902.  
 Biryuzova, V. I. 2048, 2049, 2050, 2051.  
 Bishop, F. W. 1086, 3096.  
 Black, L. M. 491, 492.  
 Blackovic, D. 616.  
 Blank, H. 154, 724, 1377, 2916.

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 Blayden, H. E. 463.  
 Blicharski, J. 18, 19, 20, 21, 22, 23, 24.  
 Blockeel, J. 67.  
 Bloom, G. 79, 1042.  
 Blum, J. 2861, 2862.  
 Bobalek, E. G. 2868, 2869.  
 Bode, O. 2021, 2022, 2703.  
 Boissier, J. 528, 944, 1182.  
 Böke, W. 2210.  
 Bolle, A. 2190.  
 Bonanome, A. 2125.  
 Bondi, A. 2759.  
 Bonetti, E. 30, 31, 32.  
 Bonifas, V. 1374.  
 Born, S. 252.  
 Borysko, E. 1309, 2581, 2582.  
 Bosshard, H. H. 1217.  
 Botty, M. C. 3101.  
 Bouroncle, B. A. 1186.  
 Bouteville, J. 658.  
 Bowler, E. S. C. 698, 1232, 1232a, 1233.  
 Boyce, J. F. 1368.  
 Boyes, B. W. 594.  
 Boyle, W. S. 1297.  
 Bradfield, J. R. G. 3717, 3718.  
 Bradford, E. B. 25, 925, 1618.  
 Brandes, D. 3370.  
 Brandes, J. 3872.  
 Brauer, G. M. 723.  
 Brauer, K. H. 366.  
 Braun, Günther 1332, 1333.  
 Braunsteiner, H. 304, 305, 1103, 1857.  
 Breese, S. S. 542.  
 Breitling, G. 3065.  
 Bressou, M. 2884.  
 Breton-Gorius, J. 346, 347, 348, 349, 355,  
 356, 357, 1083, 2845, 2846, 2847, 2848.  
 Bricka, M. 350, 351, 352, 353, 354, 355,  
 356, 357, 358, 361, 2813, 2814, 2847, 2848,  
 3176.  
 Briefs, A. 523, 523a.  
 Brieger, E. M. 1339.  
 Bringmann, G. 1733, 3168, 3697.  
 Brockway, L. O. 379a.  
 Brodie, A. F. 2493.  
 Broser-Warminsky, R. 77.  
 Brown, A. L. 1563.  
 Brown, G. L. 2930.  
 Brown, Ray A. 1226.  
 Brown, R. 3095.  
 Brueckner, A. L. 1468, 2949, 2950, 2951, 2952,  
 2953, 2954, 2955, 2956, 2957, 2958, 2959,  
 2960, 2961, 2962, 2963, 2964, 2965, 2966,  
 2967, 2968, 2969, 2970, 2971, 2972, 2973,  
 2974, 2975, 2976, 2977, 2978, 2979, 2980,  
 2981, 2982, 2983, 2984, 2985, 2986, 2987,  
 2988, 2989, 2990, 2991, 2992, 2993, 2994,  
 2995, 2996, 2997, 2998, 2999, 3000, 3001,  
 3002, 3003, 3004, 3005, 3006, 3007, 3008.  
 Brunner, A. 994.  
 Bryant, P. J. 3046.  
 Bryant, S. H. 3672.  
 Buch, A. 1234.  
 Buckingham, M. J. 3361.  
 Bujnow, N. I. 771.  
 Bunting, H. 161, 162, 162a, 1287, 2377,  
 2380, 3506.  
 Burger, W. C. 3399, 3478, 3479.  
 Burmeister, B. R. 3363.  
 Buse, A. 2913.  
 Bussmann, M. 1535.  
 Bussot, J. 3081.  
 Bustraen, M. 3663.  
 Butenuth, G. 1340, 1341.  
 Buzon, J. 3026, 3080, 3081, 3082.  
 Buzzell, A. 561.  
 Byloff, R. 1234.  
 Byrd, J. D. 3877.  
 Bystricky, V. 414.  
 Cady, J. G. 492a, 493.  
 Calbick, C. J. 2265.  
 Calish, S. R. 3503.  
 Callan, H. G. 3675.  
 Caló, A. 62.  
 Campbell, R. 1196, 1197.  
 Canivenc, R. 627, 2360.  
 Canzani, R. 881, 882.  
 Capot, L. 1068, 2080, 2360.  
 Carasso, N. 1372, 1373.  
 Carlier, E. 68, 69.  
 Carlsen, F. E. 564, 1519, 1806, 1831, 3266,  
 3267.  
 Carr, P. H. 829, 2502, 2648.  
 Carroll, K. G. 1163.  
 Casarotti, H. 883.  
 Casorati, V. 1125.  
 Castagnoli, C. 178.  
 Castelnuovo, G. 2732.  
 Cateigne, G. 962.  
 Cater, D. B. 476.  
 Ceccaldi, P. F. 3067.  
 Challande, R. 2704.  
 Challice, C. E. 1015, 1176, 1177, 1358,  
 3725.  
 Chang, S. 2968, 2969, 2970, 2986.  
 Chanson, P. 2277.  
 Chapman, G. B. 1504b, 1677, 1678, 1679.  
 Chaudron, G. 610, 704, 705, 706.  
 Chaume, G. 2172, 2623.  
 Chayen, J. 571.  
 Chidester, J. 694.  
 Chiozzotto, A. 81, 82.  
 Chiuma, E. 1238.  
 Chopra, I. C. 3759.  
 Chow, Fu Ho 675.  
 Clark, D. 573, 574.  
 Clark, E. 2970.  
 Clarke, B. 2304, 2305, 2306, 2307, 2308,  
 2309, 2310, 2311, 2312.  
 Clement, G. 670.  
 Clemente, C. D. 3724.  
 Clermont, V. 2005.  
 Clews, C. J. B. 3691.  
 Cochran, G. W. 1167, 2415, 3702.  
 Coffey, H. F. 148, 149a, 3763, 3764.  
 Cohen, C. 1417.  
 Cohen, M. 645.  
 Cohen, T. 1017.  
 Coheur, P. 1465.  
 Collet, A. 2815, 2816, 2817, 2818, 2819,  
 2820, 2821, 2822, 2823, 2824, 2825, 2826,  
 2827, 2828, 2829, 2830, 2831, 2832, 2833,  
 2834, 2835, 2836, 2837, 2838, 2839.  
 Collett, A. R. 3193.  
 Comer, J. J. 198, 1515, 1516, 3192.  
 Common, I. F. B. 820.  
 Commoner, B. 3791.  
 Constantin, T. 219.  
 Cook, M. L. 403.  
 Cook, S. F. 174.  
 Cook, S. R. 2978, 2979, 2980, 2981, 2992,  
 2996.  
 Cooperstein, M. 1292.  
 Corey, R. B. 2317.  
 Cornuet, P. 2166.  
 Corti, U. A. 3398.  
 Cos, A. L. 1938.  
 Cosslett, V. E. 543, 544, 545, 2617, 2618.  
 Cottone, M. A. 2489.  
 Cottrell, T. L. 38.  
 Coutinho, L. M. 1002.  
 Cowles, P. B. 1228.  
 Cox, A. 572.  
 Coy, 2482.

Coyle, R. A. 1260.  
 Cramer, D. I. 1453.  
 Cravath, A. M. 451.  
 Croft, R. C. 245.  
 Croissant, O. 218a, 2159, 2160, 2161, 2162,  
 2163, 2164, 2165, 2166, 2168, 3714, 3715.  
 Csaky, T. Z. 239.  
 Cuckow, F. W. 177, 1993.  
 Cullel, R. 3989.  
 Cushing, D. H. 1612.  
 Cutter, P. R. 1645.  
  
 Dahl, A. O. 1123.  
 Dalhamn, T. 3050, 3051.  
 Dalitz, V. C. 3111.  
 Dalton, A. J. 1265.  
 D'Amore, A. 62.  
 Daniels, C. W. 2240, 2241.  
 Danon, D. 3133.  
 Danon, M. 793.  
 Danto, J. L. 3931.  
 Dargent, R. 1133, 1134, 1135.  
 Darnis, F. 618.  
 Das Gupta, N. N. 668, 826, 827, 973, 1447,  
 2946, 3332.  
 Daubeney, R. de P. 693.  
 Davidson, J. N. 3441.  
 Davis, F. H. 11.  
 Davoine, F. 281, 282, 283.  
 Dawes, F. 3304.  
 Dawson, I. M. 47, 48, 184, 1746, 3441, 3725.  
 Day, M. F. 2396.  
 Day, W. C. 2971, 2972, 2973, 2974, 2975,  
 2976, 2987.  
 De, M. L. 668, 799, 800, 973, 1447, 1448,  
 2946.  
 De Greve, L. 3740, 3741.  
 Deguchi, K. 4021.  
 Degueldre, L. 841.  
 Dekeyser, W. 3783.  
 Delaha, E. C. 2977, 2978, 2979, 2980, 2981,  
 2982, 2983, 2984, 2985, 2991, 2992, 2993,  
 2994, 2996.  
 Delman, A. D. 3027.  
 Delvigne, J. 1263.  
 DeMarsh, Q. B. 1901, 1902.  
 De Mendonca, I. A. 2410.  
 de Monte, A. J. H. 3759.  
 Dempsey, E. W. 1752, 2096, 3936, 3937.  
 Dempster, G. 959.  
 de Muelenaere, H. 69.  
 Denués, A. R. T. 2446, 2481.  
 De Robertis, E. 259, 1052, 1053, 1054, 1055,  
 1065, 1066, 1189.  
 Dervichian, D. G. 2846.  
 Dervichian, J. M. 218a.  
 Deryugin, I. A. 2565.  
 Descamps, J. 641.  
 Desjardins, P. R. 3337, 3338.  
 de Souza Santos, H. L. 909, 994, 996, 997,  
 998, 999, 1000, 3470, 3471, 3814.  
 de Souza Santos, P. 905, 994, 995, 996, 997,  
 998, 999, 1000, 1726, 3814.  
 Dettmer, N. 1633, 3284.  
 Deubner, B. 2561, 3105, 3239.  
 Deubner, N. 1882, 1883.  
 Deutsch, K. 693.  
 Devaux, J. 380.  
 Devine, R. L. 234, 235, 236.  
 Dianzani, M. U. 2620.  
 Dietrich, J. W. 2758.  
 Diomede-Fresa, V. 1271.  
 Dmochowski, L. 90, 2445, 2700, 2701, 2702.  
 Dolan, W. W. 977.  
 Dolch, M. E. 1962.  
 Domermuth, C. H. 1003.  
 Don, P. A. 3725.  
 Donald, H. B. 1166, 1799.

Dong, L. 2798.  
 Dontcheff, A. 306, 2627.  
 Dorgelo, G. 3179.  
 Dornfeld, E. G. 2793, 3032, 3033, 3034, 3035.  
 Doty, P. M. 427.  
 Dougherty, T. F. 693a.  
 Douglas, H. C. 12a, 13.  
 Downer, A. N. 589.  
 Dragesco, J. 375, 376, 464.  
 Dragsdorf, R. D. 1542.  
 Drews, G. 2592.  
 Dreyfus, B. 61.  
 Duchateau, C. 1387.  
 Duchateau, G. 1388, 1389.  
 Duguid, J. P. 3445.  
 Dúker, H. 2434, 2435.  
 Dulis, E. J. 1163.  
 DuMond, J. 1613.  
 Dupouy, G. 1136, 3600.  
 Dupuy, A. 358.  
 Dyson, J. 1480.  
  
 Eaton, J. C. 946.  
 Eaves, G. 769, 770, 822, 2701.  
 Eckert, E. A. 239, 240, 2439, 3362, 3363.  
 Eden, M. 1868, 1869.  
 Edlinger, E. 1324, 1325.  
 Edmunds, P. N. 959.  
 Edwards, G. A. 751, 905, 1002, 3470.  
 Edwards, M. R. 751.  
 Edwards, O. F. 466, 1432.  
 Eguchi, I. 2332.  
 Egyessy, D. M. 1851.  
 Ehret, C. F. 2870.  
 Einberg, E. 688.  
 Einehand, J. 1342.  
 Einstein, P. A. 1481.  
 Eisenstark, A. 1542.  
 Eisenstark, R. 1010.  
 Elbers, P. E. 315.  
 Elbers, P. F. 540.  
 Elersich, V. A. 3762, 3765.  
 Elford, W. J. 814, 1746, 3725.  
 Ellinger, J. P. 1157, 1158.  
 Elliott, R. L. 2296, 2299.  
 Elliott, S. B. 404, 405, 406.  
 Ellis, A. L. 1807.  
 Ellis, S. G. 1680.  
 Ellison, S. A. 2456, 2457, 2458, 2459, 2460,  
 2461, 2462, 2463, 2464.  
 Elmes, P. C. 3880, 3881.  
 Elschner, B. 985.  
 Emde, K. H. 3260.  
 Emerton, H. W. 35, 1565.  
 Engström, A. 118.  
 Engström, H. 422, 423, 630, 3868.  
 Enoki, T. 3620, 3622.  
 Epstein, B. 881, 882, 884, 885.  
 Erdtman, G. 10.  
 Erickson, J. O. 96, 1962, 2084, 2085, 2086,  
 2206.  
 Esaki, T. 3521.  
 Evans, A. S. 3044.  
 Evans, T. C. 228, 229, 230, 231, 1801.  
  
 Faber, J. E., Jr. 2092.  
 Fabricant, C. 2004.  
 Fahrenbrock, M. 2384, 2385.  
 Farnsworth, H. E. 565.  
 Farquhar, M. G. 3070, 3071, 3072, 3073.  
 Farr, W. K. 1727.  
 Farrant, J. L. 820, 821.  
 Favard, P. 1372, 1373.  
 Fawcett, D. W. 600.  
 Febvre, H. L. 304, 305, 505, 506, 2628,  
 2629, 2630, 2631, 2632.  
 Felix, M. D. 783, 784, 785, 786, 787, 788,  
 1265.

- Fellingner, K. 507, 508, 509, 510, 511, 512, 513, 514, 515, 516.  
 Feltykowski, A. 18, 19, 20, 21, 22, 23, 24, 978, 3123, 3124, 3386.  
 Fenner, F. 1077.  
 Ferguson, R. A. 1112.  
 Ferris, W. 3863, 3864.  
 Fert, C. 831, 832, 833, 834, 910, 3598.  
 Fessler, J. H. 1809.  
 Fiala, R. 984.  
 Finter, N. B. 1614.  
 Fischbein, E. 3965.  
 Fischer, H. 1779.  
 Fisher, H. W. 2177, 2178, 2179.  
 Fister, G. M. 695.  
 Fitz-James, P. 1524.  
 Flaig, W. 495, 1777.  
 Flewett, T. H. 655, 980, 981, 982.  
 Florent, A. 3668.  
 Florian, E. 3667.  
 Florkin, M. 1387, 1388, 1389.  
 Fluke, D. J. 3625.  
 Fonseca, N. M. 1052, 1053.  
 Fontaine, R. 1193.  
 Forestier, H. 528.  
 Forziati, A. F. 723.  
 Fosdick, L. S. 1936.  
 Fragstein, C. 3832.  
 Frājola, W. J. 829a, 1987.  
 Franchi, C. M. 886, 887, 888, 889, 889a, 890, 891.  
 Franchini, A. 130.  
 Frank, P. 1193.  
 Franken, A. J. J. 3732.  
 Fraser, D. 3918, 3919.  
 Fraser, M. J. 1223.  
 Fraser, R. D. B. 2931.  
 Fréchette, Van Derck 1796.  
 Freeman, L. W. 2369.  
 Freeman, M. W. 3810.  
 Freixa, P. 361.  
 Friberg, U. 424, 425.  
 Friedlaender, M. H. G. 2932.  
 Friedman, M. 1198.  
 Friend, C. 3327.  
 Frimer, A. I. 3502, 4051.  
 Fripiat, J. J. 1263.  
 Frisk, A. 1043.  
 Froula, H. 1681.  
 Fujii, H. 3621.  
 Fujii, O. 3623.  
 Fujita, T. 3539.  
 Fujiwara, T. 1981, 2354.  
 Fukami, A. 3585.  
 Fukase, M. 33.  
 Fukuda, M. 1871.  
 Fukuda, S. 3200.  
 Fukui, K. 4038.  
 Fukumi, H. 2594.  
 Fukushima, K. 3381.  
 Fukuya, I. 4034a, 4035, 4036, 4037, 4038, 4039, 4040.  
 Fuller, M. L. 805.  
 Fulton, R. W. 1454.  
 Funada, S. 3200.  
 Furuzawa, Y. 3536, 3537.  
 Gain, R. 2795.  
 Gansler, H. 3134.  
 Gard, S. 2188.  
 Garfitt, R. G. 1485, 2678.  
 Garton, G. 3704.  
 Garvey, J. S. 3747, 3748.  
 Garzo, T. 1915.  
 Gasic, G. 881, 882.  
 Gautier, A. 307, 308, 309, 310, 311, 649, 1986, 2633, 2635.  
 Gautier, P. 1137.  
 Gauzit, M. 747, 748, 3347, 3348.  
 Gaylord, W. H. 2377, 2378, 2379.  
 Geach, G. A. 593.  
 Geever, E. F. 850.  
 Gelotte, B. 3468.  
 Gentil, K. 2218.  
 Georgi, C. E. 3882.  
 Gerard, R. W. 2.  
 Gessler, A. E. 1419, 1420.  
 Gettner, M. E. 1508, 1682, 1683, 1684, 2666, 2842.  
 Geumlek, M. 2969, 2986.  
 Gey, G. O. 170, 171, 1765.  
 Gey, M. K. 1307, 1308.  
 Gigante, D. 3510.  
 Giltairé-Ralyte, L. 2815, 2816, 2817, 2818, 2819, 2820, 2821, 2822, 2823, 2824, 2825, 2826, 2827, 2828, 2829, 2830, 2831, 2832, 2833, 2834, 2835, 2836, 2837, 2838, 2839.  
 Girard, H. 284.  
 Girardi, A. J. 1287.  
 Giuffria, R. 3687.  
 Giuntini, J. 991, 3756.  
 Glass, I. 1105, 1106.  
 Glassbrook, C. I. 620.  
 Glatthaar, E. 3769.  
 Glauert, A. M. 543, 545, 546, 547.  
 Glemser, O. 612.  
 Gochenour, W. S., Jr. 524.  
 Goebel, W. F. 1835, 1836.  
 Goedheer, J. C. 611.  
 Gold, A. H. 745, 1832, 1833, 3959, 4013.  
 Gönner, R. 961.  
 Gooden, E. L. 972.  
 Goodman, J. R. 2798.  
 Gordon, M. 758.  
 Gorius, M. J. 359, 360.  
 Gorrill, R. H. 656.  
 Gralén, N. 2088, 2784.  
 Grassmann, W. 1723, 1724, 2571, 2572.  
 Graziosi, F. 633, 634, 635.  
 Greclius, G. 120.  
 Green, I. 987.  
 Green, T. D. 1550.  
 Greenspan, G. 2020.  
 Greenwood, A. D. 2309, 2310, 2311, 2312.  
 Greider, M. H. 1186, 1187, 1188, 1987.  
 Grein, A. 152, 153.  
 Grelewicz, L. 1105.  
 Grenon, M. 3083.  
 Grey, C. E. 379, 3327.  
 Grignolo, A. 131, 132, 133, 2346.  
 Grinshpan, L. B. 3766.  
 Grivet, P. 587.  
 Gropp, A. 301.  
 Gross, J. 1660, 1661, 2225, 2346, 3242.  
 Grube, W. L. 3811, 3812.  
 Grula, E. A. 466.  
 Grüm, H. 1334.  
 Grün, L. 3115, 3234.  
 Grünholz, H. 1446.  
 Grunsberg, L. 185.  
 Guba, F. 155, 1486, 2894, 3263, 3264.  
 Guelin, A. M. 1015.  
 Guerin, M. 302, 2634.  
 Guha, A. 800, 826, 827, 973, 2946.  
 Guillaume, J. 669, 2623.  
 Guinand, S. 932.  
 Guinier, A. 2846.  
 Gulinsky, E. 1897.  
 Gupta, K. C. 3759.  
 Gustafson, G. 3579.  
 Gustavson, K. H. 426.  
 Guyénot, E. 794, 795.  
 Haagen-Crodel, B. 1615.  
 Haagensen, C. D. 929, 929a, 930.  
 Haasser, C. 1181, 1182, 1776.

- Habraken, L. 700, 701.  
 Haefer, R. 1370.  
 Hagawara, T. 2642.  
 Hagedorn, D. J. 3436, 3478, 3479.  
 Hagiwara, A. 3607.  
 Haguénau, F. 301, 311, 312, 313, 689, 2633.  
 Hahn, F. E. 3938.  
 Hahn, M. 2146, 2147.  
 Hall, D. A. 603, 3703.  
 Hall, J. L. 3193.  
 Hall, W. K. 2259.  
 Hallen, O. 1012.  
 Ham, A. W. 1768, 1769.  
 Hamada, H. 3523.  
 Hamid, S. 1452.  
 Hamilton, J. F. 3244.  
 Hamilton, P.-K. 805.  
 Hamlin, A. 1537, 1538, 1539.  
 Hamm, F. A. 712a, 713, 714, 1507a, 1716.  
 Hammen, R. 3266.  
 Handschuhová, O. 1627, 1631.  
 Hannoun, C. 962.  
 Hansen, P. A. 1545, 1546.  
 Hansen, S. 3443.  
 Hanson, E. J. 225.  
 Hanson, J. 1791.  
 Hanson, R. P. 675.  
 Hanszen, K.-J. 439.  
 Hanzon, V. 3430, 3431, 3432.  
 Hara, K. 3584.  
 Harel, J. 303, 304, 305, 308, 314, 2628, 2629, 2630, 2631, 2632, 2634.  
 Harker, D. 2245.  
 Harman, J. W. 3853, 3854, 3855.  
 Harmon, M. P. 2973, 2974, 2987, 3003, 3004.  
 Harsewinkel 2372, 2373.  
 Hartman, P. E. 368a, 369, 2493, 2494, 2706.  
 Hartman, R. E. 1382.  
 Hartman, R. S. 1551.  
 Hartmann, J. F. 2102.  
 Hartmann-Fahnenbrock, M. 2202, 2203.  
 Hartsell, S. E. 1429, 1430, 1431.  
 Hasegawa, H. 3535, 3536, 3537.  
 Hashimoto, H. 3630.  
 Hashimoto, T. 4034a, 4037, 4038, 4039, 4040.  
 Hass, G. M. 84, 85, 86.  
 Hata, D. 2885.  
 Hauge, M. 3267.  
 Hay, R. H. 2708.  
 Hayashi, H. 3520.  
 Hayflick, L. 2109.  
 Heagan, B. 3127, 3128.  
 Hebert, J. 701.  
 Heckman, F. A. 3574.  
 Hedman, S. 1038, 3235, 3236.  
 Hedvall, J. 3847.  
 Heller, L. 1258.  
 Hellier, F. F. 1354.  
 Helwig, G. 2032, 2033.  
 Henderson, K. 2037.  
 Hendricks, S. B. 492a, 493.  
 Hénin, S. M. 621, 622.  
 Henkel, E. 951.  
 Henle, W. 1149.  
 Hennessen, W. 1441, 3178.  
 Heremans, F. 3740.  
 Hess, G. E. 903, 1382, 1550, 3337.  
 Hess, W. M. 2081.  
 Hickman, J. W. 2988, 2989, 2990.  
 Hieber, F. 915.  
 Higashizawa, S. 4022.  
 Highberger, J. H. 1414, 1415, 1416, 3242.  
 Higuchi, T. 1903, 3611.  
 Hildebrand, F. A. 199.  
 Hillier, J. 368a, 369, 663, 664, 1028, 1303, 1505, 1548, 2004, 2494, 2498, 2499, 3705, 3706.  
 Hirano, K. 4007.  
 Hiratsuka, H. 3644.  
 Hirota, S. 33.  
 Hirschfeld, F. L. 1205, 1838.  
 Hirst, W. 1482, 1504.  
 Hirts, J. 284.  
 Hjorth, S. 3868.  
 Hocart, R. 2624, 3139.  
 Hodge, A. J. 949, 1078, 2398, 3373.  
 Hoegen, K. 242, 243.  
 Hoffman, G. W. 1690.  
 Hoffman, H. 647.  
 Hoffman, J. F. 1685.  
 Hofmann, U. 1070, 1376, 2571, 2572, 2573, 3857.  
 Hoge, A. R. 996, 3470.  
 Holt, A. S. 1817, 1818.  
 Holz, J. 559, 560.  
 Honeycombe, R. W. K. 570.  
 Honjo, G. 1651.  
 Hope, A. B. 1705, 2398.  
 Horne, R. W. 2611, 2739, 3186, 3187.  
 Horsfall, F. L., Jr. 3708.  
 Hoshino, T. 3647.  
 Hosier, P. B. 367.  
 Hossack, J. 815.  
 Hoster, H. A. 1737.  
 Hotchin, J. E. 1015, 3725.  
 Hounam, R. F. 3367.  
 Houston, B. R. 1349, 1352.  
 Houwink, A. L. 918, 2041, 3112.  
 Howes, E. L. 2295.  
 Hradečná, Z. 1627, 1628, 1629, 1630, 1631.  
 Hubbell, H. H. 3705.  
 Huber, L. 1924, 2411, 3135, 3136, 3137, 3138, 3172.  
 Huber, O. 2561, 2562, 2564.  
 Hubig, W. 2436.  
 Huebner, R. J. 542.  
 Huff, H. J. 2708.  
 Hug, O. 1152.  
 Hughes, A. F. W. 467.  
 Hughes, K. M. 3495.  
 Hume-Rothery, W. 807.  
 Hunger, G. 1828.  
 Hutter, R. G. E. 1292.  
 Huxley, H. E. 1526, 1527, 1706, 1707, 1708.  
 Iberg, R. 1506.  
 Ignesti, U. 3831.  
 Ikeya, M. 3631.  
 Imhof, K. 1739, 1740, 1741, 1742, 1743, 1744.  
 Inoi, S. 4038.  
 Inokuchi, K. 3582.  
 Inokuchi, T. 3582.  
 Inoue, S. 3613.  
 Inoue, Y. 1880, 3524.  
 Isaacs, A. 937, 938.  
 Ishii, M. 3603, 3604, 3605.  
 Ishikawa, A. 1880.  
 Isings, J. 3270.  
 Itatani, T. 2472.  
 Ito, Hirotomo 3646.  
 Ito, Kazuo 3524.  
 Ito, Keiko 4023.  
 Ito, R. 3621.  
 Ito, T. 1802, 1803, 1804, 3524.  
 Ito, Y. 1954.  
 Itoh, K. 3599.  
 Itoh, T. 3599.  
 Iverson, F. K. 1020.  
 Iwai, Shin-ichi 2554.  
 Jackson, E. B. 3938.  
 Jackson, M. L. 702, 1979, 1980.  
 Jackson, S. F. 571, 2930, 2931.  
 Jacob, L. 679.  
 Jahn, B. 1600.

James, T. W. 1543.  
 Janney, C. D. 3312.  
 Jarmolinska, A. 3386.  
 Jee, Webster S.S. 78.  
 Jensen, D. D. 1350.  
 Jensen, E. 628.  
 Johann, I. 1229, 2204, 2205.  
 Johansen, G. 628.  
 Johnson, D. H. 3389.  
 Johnson, F. H. 664.  
 Johnson, P. 2702.  
 Johnstone, K. I. 1529.  
 Jominy, W. E. 3130.  
 Jones, D. 738, 739.  
 Jonquieres, E. D. L. 2291.  
 Joubert, F. J. 2249.  
 Joy, J. E. 2794.  
 Juenker, A. 1112.  
 Jull, G. W. 1255.  
 Jung, H. C. 3073.  
 Kaesberg, P. 2151, 3056, 3057, 3479, 3480.  
 Kafig, E. 2404, 2405.  
 Kahle, B. 3513.  
 Kahler, H. 789, 790, 989, 990, 2226, 2871.  
 Kahn, R. P. 3338.  
 Kakutani, I. 4034a, 4035, 4036, 4037, 4038, 4039, 4040.  
 Kallman, F. L. 2863, 2864, 3920, 3921.  
 Kambe, K. 1651.  
 Kamijo, Y. 3620.  
 Kane, D. J. 3577.  
 Karzon, D. T. 2550.  
 Kassanis, B. 220.  
 Kato, N. 1466, 1467.  
 Katsui, K. 2646.  
 Katsura, S. 3616.  
 Kawahara, Haruyuki 3609, 3610, 3611, 3616.  
 Kawano, Michitaka 1903.  
 Kawano, Morikuni 2472.  
 Kaye, W. 2723, 2724, 2725, 2726, 2727, 2728.  
 Kedesdy, H. H. 1874.  
 Keech, M. K. 603.  
 Kehler, H. 1570, 1571.  
 Keidel, F. A. 1557.  
 Keidel, H. J. W. 2041.  
 Kellenberger, E. 452, 452a, 795, 1925, 2191, 2411, 3135, 3136, 3172, 3849.  
 Keller, E. B. 2225.  
 Keller, F. 1787.  
 Kellogg, D. S. 2442.  
 Kelly, A. 1692.  
 Kelly, F. C. 2930.  
 Kern, R. A. 1942, 1943.  
 Kern, S. F. 1940, 1941.  
 Kerr, P. F. 805.  
 Kienast, G. 3659.  
 Kimball, W. A. 3066.  
 Kinder, E. 1990, 1991.  
 Kingkade, M. J. 1941, 1943.  
 Kircher, H. 2604, 2605, 2606, 2607, 2608.  
 Kirchgessner, W. G. 3466.  
 Kirkpatrick, A. F. 3102.  
 Kishimoto, N. 3197.  
 Kissel, J. W. 2586.  
 Kita, M. 3650.  
 Kitamura, M. 4009.  
 Kitasaki, U. 3569.  
 Kitasato, B. 3712.  
 Klein, E. 1229, 1839.  
 Klein, M. 1193.  
 Klein, R. 305, 506, 1095, 2631, 2632.  
 Kleineberger-Nobel, E. 767.  
 Kleinschmidt, A. 1638, 1639.  
 Klemperer, O. 934.  
 Kling, W. 1361, 1556.  
 Klötzler, F. 2559.  
 Knappeis, G. G. 629.

Knechtel, H. E. 1164.  
 Knight, C. A. 1541.  
 Knoch, M. 562, 3262, 3934.  
 Knoll, M. L. 2253.  
 Knowlton, K. C. 3390.  
 Kobayashi, K. 1881.  
 Koch, A. 1571.  
 Koch, K. 612.  
 Koch, W. 1165.  
 Koffler, H. 2293, 3075.  
 Köhler, E. 431.  
 Kohra, K. 2609.  
 Koike, M. 3612, 3613, 3615.  
 Koizumi, M. 1808.  
 König, H. 562, 1610, 1657, 2234, 3934.  
 Kono, A. 4038.  
 Koonce, S. E. 624a.  
 Koprowski, H. 1224, 1225, 1226.  
 Korda, F. H. 3063.  
 Kožoušková, J. (Kozousco) 2039, 2040.  
 Kramer, H. 2223.  
 Kramer, J. 3734.  
 Krasny, J. F. 3227.  
 Krauze, S. 1107.  
 Kreger, D. R. 1761, 3113, 3114.  
 Krieger, W. 1601, 1602, 1603.  
 Krisch, A. 3874.  
 Krüger, F. 3944, 3945.  
 Kubin, G. 2897.  
 Küchenhoff, O. 444, 445, 446, 447, 448.  
 Küchenhoff, T. 444, 2062.  
 Kuchibaand, J. 3645.  
 Kudo, K. 3651.  
 Kuhlmann-Wilsdorf, D. 3927, 3928, 3929.  
 Kukidome, K. 3623.  
 Kummer, A. 1098.  
 Kuno, T. 1466, 1467.  
 Kuroda, T. 3197.  
 Kurokawa, M. 1359.  
 Kusakawa, T. 3693.  
 Kushnir, U. M. 613, 3568, 4050, 4051.  
 Küster, E. 1173, 1777.  
 Kusunoki, S. 4007.  
 Kuyper, B. 2876, 3869.  
 Kyle, T. S. 1011.  
 Laborie, P. 642, 643.  
 Lacour, F. 1476.  
 Lacy, D. 657.  
 Ladd, M. W. 2081, 2082.  
 Laden, E. 2206.  
 Lagasse, A. 3311.  
 Lagermalm, G. 1982, 2783, 2784.  
 Lagerstedt, S. 1344, 1345, 1346, 1347, 1348.  
 Lambe, M. S. 176.  
 Lamont, J. L. 755.  
 Lamp, H. 3660.  
 Langlykke, A. F. 2020.  
 Lanni, F. 3364.  
 Lansing, A. I. 673, 845, 1641, 3862.  
 Larson, C. 3372.  
 Larson, R. H. 2083.  
 Larsson, B. 425.  
 Lauffer, M. A. 561.  
 Lavand'homme, C. 1829.  
 Lazarowitz, A. 1018.  
 Leblois, J. 1298.  
 Leblond, C. P. 688.  
 LeBras, L. R. 429, 2868, 2869.  
 Lecce, J. G. 2482.  
 Lecuir, R. 917.  
 Leder, L. B. 2329.  
 Lees, C. S. 754, 2224.  
 Lefker, R. 381.  
 Leger, A. E. 3813.  
 Lehmann, F. E. 134, 135, 136, 137, 138.  
 Leiby, G. M. 5.  
 Lembke, A. 1064.



Lemoine, P. 1829.  
 Lendvai, A. 1915.  
 Lenoir, G. 644.  
 Lenz, F. 2094, 3225, 3226, 3779.  
 Leon, J. 2666.  
 León-Blanco, F. 64a, 65, 3809.  
 Lépine, P. 765, 3714, 3715.  
 Lepus, R. 312, 315.  
 Le Poole, J. B. 247, 3743.  
 Le Rutte, W. A. 2170.  
 Lessler, M. A. 1987.  
 Levavasseur, G. 1449.  
 Levi, G. 892.  
 Levin, R. 179.  
 Levkin, N. P. 2071, 3568.  
 Levy, E. 171.  
 Lewis, C. R. 3636.  
 Ley, A. C. 3938.  
 Leyon, H. 14.  
 Libby, R. L. 1062.  
 Lichtenberg, S. 3327.  
 Liebermann, M. 1149.  
 Liebmann, G. 958.  
 Lillie, M. G. 2990.  
 Lind, S. C. 3819.  
 Lindberg, J. 2089.  
 Lindemann, B. 2356.  
 Linden, I. 2085, 2086.  
 Lindner, E. 921, 2803.  
 Lingen, C. 1038.  
 Lion, K. S. 386.  
 Lippert, W. 1152, 1778, 1779, 1780, 1781.  
 Little, K. 754.  
 Litwak, A. A. 4053.  
 Liu, C. 2706.  
 Liu, O. C. 1149, 1614.  
 Lloyd, B. J., Jr. 789, 790, 1864, 1865, 1866, 1867, 1868, 1869.  
 Loeser, A. 2063.  
 Logan, R. 3441.  
 Lominski, I. 816.  
 Longuet-Escard, J. 106.  
 Loomis, W. E. 2502.  
 Lopes, H. B. 908.  
 Loriers, J. 750.  
 Lovas, B. 1851, 2273, 3667.  
 Love, R. 1126.  
 Luborsky, F. E. 2382.  
 Lüdewitz, O. 3253.  
 Ludvik, Jiří 791, 792.  
 Ludwig, K. S. 1346, 1347, 1348.  
 Lundquist, D. 838.  
 Lutz, G. 1343.  
 Lyk'yanovich, V. M. 2154.  
 Lynch, V. 626.  
 Lyons, S. C. 716, 2019.  
 McCartney, J. T. 1717.  
 McCarty, K. S. 1419, 1420.  
 McClain, M. E. 3288.  
 McCormick, M. J. 3634.  
 McCulloch, D. 1294.  
 McFarland, M. E. 1561.  
 McFarlane, A. S. 184.  
 McIndoe, W. M. 3441.  
 McKenzie, F. F. 3966, 3967.  
 McLauchlan, T. A. 3305, 3334, 3335.  
 McLean, D. 3691.  
 McLean, J. P. 1705, 1709, 1710, 1711, 2398.  
 McLean, R. 2493.  
 McLennan, L. W. 43.  
 McMahan, K. J. 1010.  
 McMillan, W. R. 1450, 1451.  
 Maaloe, O. 385.  
 Macdonald, K. D. 920.  
 Mackinney, D. 2242.

Mackowiak, D. 284.  
 MacLennan, J. D. 2295.  
 Maddin, S. 3931.  
 Maeda, J. 3646.  
 Magari, S. 2643, 2644, 2645, 2646.  
 Magill, P. L. 619, 620.  
 Magnan, C. 659, 660, 661.  
 Mahl, H. 1361, 1643, 1644, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002.  
 Majno, G. 3135, 3172, 3751.  
 Majori, L. 3751.  
 Malmros, H. 1258.  
 Mandel, J. 3509.  
 Mangini, H. 316, 317.  
 Manogue, B. 1019.  
 Mapes, G. S. 3930.  
 Marcus, T. R. 861, 862.  
 Maresch, D. 1946.  
 Mariani, A. 62.  
 Mariani-Marelli, O. 62.  
 Mark, H. 3389.  
 Markali, J. 472, 1251, 1499, 1500, 1501, 1502.  
 Markey, P. 693.  
 Marotta, U. 2126, 2127, 2128, 2129, 2130.  
 Marsico, G. 139, 140, 141.  
 Martin, A. V. W. 2931.  
 Martin, C. 2166.  
 Martin, J. P. 1351.  
 Martinez de Victoria, M. 2546.  
 Marton, C. 2329.  
 Marty, B. 1138, 1139.  
 Maruse, S. 3201, 3584.  
 Massari, F. 139, 140, 141.  
 Mathieu-Sicaud, A. 106, 621, 669, 932, 2285, 2399.  
 Matoltsy, G. 1417.  
 Matsumiya, S. 3621.  
 Mattheis, H. 1855.  
 Matthews, J. M. 2358.  
 Matthews, R. E. F. 2097.  
 May, J. W. 3676.  
 Mayer, G. 627.  
 Mazia, D. 319.  
 Mazza, E. 2365.  
 Meinhart, J. O. 2180.  
 Melin, K.-A. 1038.  
 Melnick, J. L. 161, 162, 162a, 1287, 1288, 1289, 1827, 2181, 3037, 3038, 3044, 3506.  
 Mendlowitz, H. 2329.  
 Menter, J. W. 665, 666, 667, 1692, 2363, 3307.  
 Mercer, E. H. 1079, 1080.  
 Mercer, F. V. 1705, 1709, 1710, 1711.  
 Mering, J. 2343, 2344.  
 Mernan, J. P. 3391, 3392.  
 Meryman, H. T. 1561a, 2327.  
 Meunier 2080.  
 Meyer, A. 1194, 1195.  
 Meyer, G. 2063.  
 Meyer, H. 1100.  
 Mezard, M. 1884.  
 Michener, J. W. 2873.  
 Mihama, K. 1734, 1735, 3599, 3600.  
 Mikami, H. 4011.  
 Miles, J. A. R. 544, 740.  
 Militzer, W. E. 3882.  
 Millard, A. 90, 3016.  
 Milligan, W. O. 4.  
 Millot, P. 962.  
 Milne, A. A. 185.  
 Minato, H. 1808.  
 Mink, J. 200.  
 Mirimanoff, M. A. 2190.  
 Mirsky, A. E. 28.  
 Misra, S. S. 1452.  
 Mitra, R. P. 2003.  
 Mittwer, T. 180, 181, 182.

- Miyagawa, H. 3653.  
 Miyake, S. 1735.  
 Miyata, J. 3196.  
 Miyata, K. 2600.  
 Miyazaki, Y. 1533.  
 Mlczoch, F. 517.  
 Moberger, G. 119.  
 Modern, F. W. S. 148a, 2798.  
 Modin, S. 2426.  
 Mülbert, E. 377, 1392, 1459.  
 Mommaerts, E. B. 240.  
 Monroe, J. 3677.  
 Monto, R. 3013, 3014, 3015.  
 Moolten, S. E. 2970.  
 Moore, A. E. 3327.  
 Moore, Anna T. 3688, 3689.  
 Moore, C. 2315.  
 Moore, D. H. 929, 929a, 930, 1224, 1225, 1226.  
     2455, 2456, 2457, 2458, 2459, 2460, 2461,  
     2462, 2463, 2464, 2465, 2467, 2481.  
 Moore, Roger 1356, 2798.  
 Moore, R. J. 451.  
 Moore, S. 2975, 2976, 2998.  
 Morard, J.-C. 215, 216.  
 Moreau, J. 254.  
 Morgan, B. S. 1353.  
 Morgan, C. 410, 1750, 1950, 2444, 2445,  
     3143, 3144.  
 Morgan, M. M. 2330.  
 Morgenstern, W. 1367.  
 Morgenthaler, P. W. 217.  
 Mori, R. 3614.  
 Morioka, T. 4024.  
 Morita, F. 3695.  
 Morita, S. 4033.  
 Morse, K. T. 2446.  
 Morton, H. E. 3126.  
 Moser, P. 1780, 1781.  
 Mosley, V. M. 2074, 2075, 2076, 2077, 2078.  
 Moss, M. S. 2297, 2298, 2299.  
 Mosse, J. 218a.  
 Mottlau, A. Y. 1180.  
 Mottram, F. C. 861, 862, 863.  
 Moulé, Y. 649.  
 Moulthrop, I. 2981.  
 Mowry, R. W. 2466.  
 Mudd, S. 368a, 369, 806, 1548, 1686, 1687,  
     2706.  
 Muhlethaler, K. 1216, 1217.  
 Müller, A. F. 2518.  
 Müller, E. W. 952, 953.  
 Müller, Walter 250.  
 Mulvey, T. 1483, 1484, 1484a.  
 Munari, P. F. 1362, 1363, 1364, 2547.  
 Mundo Fuertes, A. 2546.  
 Munk, K. 3220, 3221, 3224.  
 Murakami, Y. 2595.  
 Murray, R. G. E. 3093.  
 Muscatine, N. A. 59.  
 Naess, T. 1502.  
 Nagai, T. 3648.  
 Nagasaki, S. 4010.  
 Naito, Y. 3606.  
 Nakamura, T. 3647.  
 Nakayama, T. 3216, 4006.  
 Nandi, S. 973.  
 Narha, K. 3200.  
 Narita, K. 3200.  
 Nasemann, T. 2744, 2745, 2746.  
 Nechitailo, N. A. 3758.  
 Neckel, I. 913, 3168.  
 Neelands, L. J. 565.  
 Nelson, F. E. 829.  
 Nelson, H. 2992.  
 Nemetschek, T. 1376, 1722, 1723, 1724.  
 Nesbitt, E. A. 1580.  
 Neuman, M. W. 2575.  
 Newberry, S. P. 710, 2613.  
 Newfang, D. M. 237.  
 Nicolai, E. 2876.  
 Nicolle, P. 1325.  
 Niebylski, L. M. 2805.  
 Nielsen, N. A. 2282.  
 Nieudorp, H. 3733.  
 Nikiforova, G. S. 3784.  
 Nishi, Y. 1239.  
 Nishino, K. 4035, 4036, 4037, 4038, 4039,  
     4040.  
 Nishitani, Y. 3522, 3523, 3524.  
 Nixon, H. L. 220, 221, 1983.  
 Nixon, W. C. 741, 742, 743.  
 Noaki, H. 33.  
 Noda, S. 3214.  
 Noike, T. 3621.  
 Nomiyama, K. 3613.  
 Nordli, E. 472, 473.  
 Norling, A. 3053.  
 Norman, A. 3142.  
 North, A. C. T. 2930, 2931.  
 Nossal, P. M. 1525.  
 Nutting, J. 744, 1792.  
 Nye, W. F. 2112.  
 Nygaard, O. 2090.  
 Oatley, C. W. 3446.  
 Obata, Y. 4025.  
 Oberlin-Mathieu-Sicaud, A. 622, 1694, 1695,  
     1696, 1697, 2624, 3067, 3139.  
 Oberling, C. 301, 302, 303, 306, 309, 311,  
     313, 314, 318, 1270.  
 Odate, Z. 4026, 4027.  
 Oeters, F. 1900.  
 Ogawa, K. 3607.  
 Ogawa, T. 1652.  
 Ohlerich, G. 1725.  
 Okada, K. 2353.  
 Okado, S. 3654.  
 Okamoto, H. 3197.  
 Okimoto, S. 4028.  
 Okita, T. 2639, 2640.  
 Okumoto, T. 3693.  
 Okuro, I. 3647.  
 Olarte, J. 64.  
 Olney, M. J. 2619.  
 Omura, H. 3995.  
 O'Neill, H. 3904.  
 Onishi, E. 3620.  
 Ono, T. 3801.  
 Ono, Y. 4012.  
 Onozaki, N. S. C. 2473.  
 Opara, Z. 2036.  
 Opderbeck, F. 3396.  
 Opfer, G. 3779.  
 Ordal, E. J. 44.  
 Ornstein, L. 1304.  
 Orth, E. 2895, 2896, 2897, 3174, 3175.  
 Orthmann, H. J. 1604.  
 Oskay, J. J. 2482, 2483.  
 Oster, C. F., Jr. 58.  
 Oswald, J. W. 1349, 1352.  
 Ota, Y. 4027.  
 Otten, E. 2747.  
 Ouboter, M. P. de Bruyn 2673.  
 Ouellet, C. 3813.  
 Owen, M. J. 2181.  
 Ozaki, Y. 1954, 1955.  
 Paasche, E. 2314.  
 Page, R. S. 1485.  
 Paine, T. O. 2382.  
 Pakesch, F. 507, 508, 509, 510, 511, 512,  
     513, 514, 515, 516, 518, 519, 520, 1103.  
 Palade, G. E. 2691, 2692, 3180, 3181, 3955,  
     3956.  
 Palay, S. L. 2688.

Palik, E. S. 3746, 3748.  
 Palmer, E. D. 2991, 2992, 2993, 2994, 2995.  
 Pande, A. 1452, 3759.  
 Pankow, G. 954.  
 Pappas, G. D. 3078.  
 Pardee, A. B. 3219.  
 Paris, C. H. 3663.  
 Parker, E. 1538, 1539.  
 Parrack, A. L. 3125.  
 Parsons, J. 3814.  
 Paseyro, P. 893.  
 Pasinetti, A. 2272.  
 Passey, R. D. 931.  
 Paul, H. L. 432.  
 Pauling, L. 2317.  
 Pazemenas, K. 170.  
 Pearce, R. 807.  
 Pease, D. C. 148, 148b, 149a.  
 Peck, Virgil 1910.  
 Peck, V. G. 1368.  
 Peers, J. H. 1750.  
 Pelczar, M. J., Jr. 2092.  
 Pena, J. M. Gonzales 1124.  
 Pernoux, E. 215, 216, 218, 285, 286, 287, 288, 289, 290, 291, 292, 293, 809, 3639, 3640.  
 Perrin-Bonnet, I. 2343, 2344, 2399.  
 Perry, B. T. 3.  
 Perutz, M. F. 817.  
 Petcher, R. H. 1248.  
 Peters, D. 2519, 2568, 3501, 3876, 3890, 3891, 3892, 3893, 3894, 3895, 3896, 3897, 3898.  
 Peterson, R. R. 846.  
 Peterson, W. H. 451.  
 Pfefferkorn, G. 243, 1846, 1847, 1848, 1849, 2057, 2733, 3870, 3871, 3946, 3947, 3948, 3949, 3950, 3951.  
 Pfister, H. 3397.  
 Pfisterer, H. 1636.  
 Philip, B. 2087, 2088, 2089.  
 Philpott, D. E. 85, 1250, 1978.  
 Picard, R. G. 3035, 3297.  
 Piccardo, M. G. 1317, 1318, 1319, 1320.  
 Pierrée, C. 3686.  
 Pilod, P. 2105.  
 Pitelka, D. R. 2406.  
 Pitre, J. 2884.  
 Piwkowski, T. 1106.  
 Plakhov, A. G. 3568.  
 Plummer, N. 3578.  
 Podolsky, M. 890.  
 Poelma, L. J. 2967.  
 Pohlit, W. 2219, 2220, 2221.  
 Polley, M. H. 667a, 667b.  
 Pollister, A. W. 2667.  
 Polson, A. 1522.  
 Poppa, H. 582, 583, 584.  
 Porod, G. 1870, 2043.  
 Porter, J. E. 2981, 2996.  
 Porter, K. R. 85, 260, 1091, 1092, 1093, 2689, 3078, 3152, 3153, 3154, 3155, 3156, 3313, 3314, 3315.  
 Pöschl, K. 1984.  
 Post, L. C. 3664.  
 Potter, C. 820, 821.  
 Powell, A. S. 416, 417, 429, 2315.  
 Powers, E. L. 1004.  
 Pratt, A. W. 989, 990.  
 Prebus, A. F. 3746, 3747, 3748.  
 Preston, R. D. 151, 1619, 2414.  
 Preuss, L. E. 3815, 3816, 3817.  
 Price, P. R. 1770.  
 Princivalle, M. 2732.  
 Prokes, V. 3243.  
 Propst, A. 1371, 2944.  
 Pruvot, T. 3026.  
 Puck, T. T. 2176.  
 Puff, A. 1959.  
 Pungor, E. 3263, 3264.

Quantz, L. 496.  
 Qureshi, S. H. 2997.  
 Rabaey, M. 1190.  
 Rabatin, J. G. 1187, 1188, 1737.  
 Rake, G. 154, 413, 724, 1377, 2484.  
 Ramberg, E. G. 1688, 1689.  
 Ramsfjell, E. 1251.  
 Rånby, B. G. 3054.  
 Ranc, G. 707, 708.  
 Randall, J. T. 225, 599, 1227, 1528.  
 Rang, O. 2437.  
 Rao, T. N. R. 1310.  
 Rappaport, C. 59.  
 Rast, N. 3881.  
 Ratzenhofer, M. 1371.  
 Rauterberg, W. 1855.  
 Rawlins, T. E. 3959.  
 Ray-chaudhuri, S. P. 799, 1448.  
 Read, H. J. 3850, 3851.  
 Reagan, R. L. 1468.  
 Reeber, H. E. 4054.  
 Reed, R. 603, 604, 744, 1067, 1498, 1771, 2700, 2701, 2702, 3703.  
 Rees, A. L. G. 753.  
 Regenstreif, E. 1410.  
 Reid, J. J. 1963.  
 Reisman, E. 3393.  
 Reissig, M. 893, 894, 1054, 1055, 1065, 1066.  
 Renoll, M. W. 3747, 3748.  
 Repina, L. 3567.  
 Requardt, K. 1639.  
 Revell, R. S. M. 11, 12, 13a.  
 Reverdin, D. L. 2331.  
 Rhoads, H. U. 591.  
 Rhodin, J. 3433, 3434.  
 Ribi, E. 2926, 3189, 3372.  
 Rice, R. V. 1860.  
 Richter, H. 1151, 1605, 1606.  
 Rietz, L. 588.  
 Rind, H. 1856.  
 Rinehart, J. F. 1071, 1072, 1073, 1074, 1074a.  
 Ring, C. E. 1158a.  
 Ringdal, K. G. 472.  
 Rinker, J. N. 2293.  
 Ripley, G. W. 1612, 1619, 2877, 2878.  
 Ris, H. 2090.  
 Ritchie, P. D. 1314.  
 Roadknight, L. 2397.  
 Robertson, R. H. S. 2373.  
 Robertson, R. N. 1081.  
 Robinow, C. F. 1169.  
 Robinson, R. A. 3827.  
 Rochow, E. G. 3103.  
 Rochow, T. G. 461a, 805, 3099, 3100.  
 Röckl, H. 2563, 2564.  
 Rodenberg, S. 719.  
 Roelofsen, P. A. 1762.  
 Rogers, G. E. 1081a, 1203.  
 Rogers, G. L. 490.  
 Rogers, H. J. 1529.  
 Rollins, M. L. 3688, 3689.  
 Rosberg, D. W. 2587, 2588.  
 Rose, H. M. 2445, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2467.  
 Rose, N. R. 2484.  
 Rosenberg, M. 4042.  
 Rosenthal, T. B. 2096.  
 Ross, A. F. 3104.  
 Ross, M. 975.  
 Ross, S. T. 3637.  
 Roth, L. E. 236, 1490, 2870.  
 Rothbard, S. 3828.  
 Rouiller, C. 310, 649, 1476, 1773, 1926, 3172.  
 Roulette, Y. 142.

- Roults, G. 1697.  
 Rountree, P. M. 1082.  
 Rouze, S. R. 1425, 1426, 1427, 1428.  
 Row, O. 2520, 2521.  
 Rowe, F. G. 461a, 805, 3101, 3102.  
 Rozsa, G. 2468, 3472.  
 Rubin, B. 3939.  
 Rubin, S. 620.  
 Ruck, H. 1870.  
 Rupp, D. 2590.  
 Ruska, E. 77, 2540.  
 Ruska, H. 751, 913, 994, 1001, 1002, 3285, 3286, 3780.  
 Russo, G. 1378.  
 Rutishauser, E. 3135, 3136, 3137, 3138.  
 Ruziczka, O. 2669, 2670.  
 Ryser, F. C. 829.  
 Ryter, A. 1927, 3133.  
  
 Sagik, B. F. 2176.  
 Saha, D. K. 828.  
 Saha, N. N. 91.  
 Sakaki, Y. 3584.  
 Sakata, S. 3655.  
 Sakurai, T. 2068.  
 Salo, T. P. 443.  
 Saloom, J. A. 1690.  
 Sampson, A. M. D. 38, 39.  
 Sand, L. 200.  
 Sansone, F. M. 2998.  
 Saporte, R. 1139, 1140.  
 Sappa, M. 2125, 2131, 2132.  
 Sapranauskas, P. 170, 458.  
 Sarkaria, D. 2242.  
 Sasaki, K. 3801.  
 Sasaki, M. 3695.  
 Sasaki, Y. 3561.  
 Sass, S. 2327.  
 Sauer, J. A. 1772.  
 Saulnier, A. 3601.  
 Sawaya, P. 905, 994, 996, 997, 998, 999, 1000, 3470.  
 Saxl, H. 603.  
 Scanga, F. 62.  
 Schachman, H. K. 2699.  
 Schaffer, W. 1751.  
 Schaffer, F. L. 3288.  
 Schenck, D. 1468, 2999, 3000, 3001, 3002, 3003, 3004.  
 Scheraga, H. A. 3391, 3392.  
 Schick, A. F. 86, 1563.  
 Schimmel, G. 585, 586.  
 Schiske, P. 1335, 1336, 1337, 1338.  
 Schleich, F. 1930, 1960, 1961, 2939, 3106, 3258, 3259.  
 Schlesinger, R. W. 3866.  
 Schlipkoter, H. W. 1948, 1949.  
 Schluge, H. 2940, 2941.  
 Schmidt, C. G. 2063.  
 Schmitt, F. O. 1295, 1296, 1414, 1415, 1416, 1660, 1661.  
 Schnauder, G. 2914.  
 Schneider, C. 1788.  
 Schneider, H. F. 4054.  
 Schooley, C. N. 2802.  
 Schrader, A. 3875.  
 Schramm, G. 648, 3222.  
 Schubert, D. C. 2330.  
 Schubothe, H. 2356.  
 Schuchmann, J. A. 248, 774, 775.  
 Schuermann, H. 120.  
 Schuetz, E. S. 143, 144.  
 Schulek, E. 2894.  
 Schultz, B. J. 2005.  
 Schultz-Larsen, J. 1519.  
 Schulz, R. A. 667b.  
 Schumacher, G. 3251, 3252.  
 Schummelfeder, N. 1316.  
  
 Schuster, G. 3168.  
 Schütz, W. 1099.  
 Schwartz, C. M. 95, 695a, 696.  
 Schwartz, W. 495.  
 Schwarz, W. 914, 3021, 3169, 3657.  
 Schwerdt, C. E. 100.  
 Schwert, F. A. 3957.  
 Schwink, C. 3122.  
 Science Museum, London, England 3293.  
 Scott, D. B. 1521, 3469.  
 Scott, G. D. 1029, 1030, 3335, 3336.  
 Scott, N. W. 1562.  
 Scott, T. F. McNair 724.  
 Scudder, C. L. 2479.  
 Seal, R. T. 391.  
 Sedar, A. W. 231, 1801.  
 Seeds, W. E. 2930.  
 Seeliger, R. 1939.  
 Seiler, K. 3009.  
 Sekido, E. 1800.  
 Sekine, E. 33.  
 Seligman, B. 2259.  
 Selzer, G. 1522, 2843.  
 Sennett, R. S. 3305.  
 Senseney, C. A. 864, 903, 1382, 1550.  
 Septier, A. 747, 748, 1278, 1279.  
 Sernka, R. P. 3130.  
 Setlow, R. B. 1198.  
 Shah, J. R. 1815, 2330.  
 Shapiro, J. E. 3699, 3700, 3701, 3702, 3965.  
 Shapras, P. 1309.  
 Sharp, D. G. 239, 240, 987, 1380, 2439.  
 Sharpe, J. W. 758, 1314.  
 Shaw, E. 2380.  
 Shekhter, A. B. 3766.  
 Shepard, C. 3055.  
 Shibanuma, H. 3562.  
 Shidaka, Y. 3644.  
 Shiga, Y. 3594.  
 Shikata, E. 1245.  
 Shimadzu, S. 2009.  
 Shimetani, S. 3648.  
 Shimizu, T. 1956.  
 Shimizu, Y. 3607.  
 Shinoda, G. 1895.  
 Shiota, N. 674.  
 Shiota, O. 1239.  
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 Shulman, S. 1861, 1862.  
 Shurman, M. M. 1863.  
 Siat, A. 1696.  
 Siddal, G. 1729.  
 Siegel, B. M. 3104.  
 Siekevitz, P. 2690.  
 Sifferlen, R. 706.  
 Sikorska, E. 1107.  
 Sikorski, J. 1034, 1830, 2108, 2522, 2707, 2917.  
 Simon, R. E. 3394.  
 Simpson, A. 1033.  
 Simpson, J. A. 2329, 2330.  
 Singh, K. 465.  
 Sinitsyn, V. 3758.  
 Sinn, L. 3482.  
 Sitte, P. 3404, 3405.  
 Sjöstrand, F. S. 10, 385, 1044, 1045, 1146, 2270, 2672, 3498.  
 Skidmore, J. W. 632.  
 Skipper, S. J. 715.  
 Smadel, J. E. 3938.  
 Smith, A. G. 1686, 1687, 1844, 2495, 2496, 2497, 2498, 2499.  
 Smith, E. J. 3005.  
 Smith, G. C. 2619.  
 Smith, I. W. 959, 960.  
 Smith, J. R. 2885.  
 Smith, L. E. 1021.

- Smith, P. A. S. 3060.  
 Smith, R. H. 1812, 3746.  
 Snellman, O. 1573.  
 Snowden, F. C. 1517, 1518.  
 Sognnaes, R. F. 3298.  
 Sohler, R. 2167.  
 Sokol, A. 1018.  
 Solov'ev, N. N. 1.  
 Sotelo, J. R. 891, 895, 896.  
 Soul, D. C. 338.  
 Souza Santos (see de Souza Santos)  
 Spahn, H. 3240.  
 Spalla, C. 153.  
 Sperling, F. G. 2109.  
 Spicer, S. S. 3145, 3146.  
 Spink, J. A. 753.  
 Spiro, D. 1706, 1707, 1708.  
 Spitzzy, H. 3438.  
 Spoendlin, H. 1045.  
 Spolarich, J. 175.  
 Sproull, R. L. 3394.  
 Stafford, E. 945.  
 Stahmann, M. A. 1860, 3056, 3057, 3399, 3436.  
 Stanier, R. Y. 2699, 3219.  
 Stanley, W. M. 3288.  
 Starr, M. P. 3194.  
 Stecher, H. 1218.  
 Steere, R. L. 3916, 3917, 3922.  
 Steigler, A. 1005.  
 Stein, J. 1744.  
 Steinhaus, E. A. 3799.  
 Steinmann, E. 1146, 1219.  
 Stelter, J. 1442.  
 Stenstrom, S. 2672.  
 Sterling, E. 1717.  
 Stern, H. 816, 818.  
 Stetson, H. W. 716.  
 Steve-Bocciarelli, D. 99.  
 Stevenson, P. C. 3704, 3706.  
 Stewart, M. T. 2982, 2983, 2984, 2985, 2993, 2994, 2995.  
 Stinebring, W. 2109.  
 Stobbe, H. 1856.  
 Stock, C. C. 1508.  
 Stoeckenius, W. 2748, 2749, 2750, 2751.  
 Stoker, M. G. P. 740.  
 Stopka, E. 921.  
 Storck, R. 3884.  
 Storks, K. H. 1581.  
 Strand, N. 3006, 3007, 3008.  
 Strang, C. D. 605.  
 Straumanis, M. E. 1837.  
 Strauss, M. J. 161, 162, 162a, 2377, 2380.  
 Striebach, M. J. 790.  
 Stromberg, R. R. 3575, 3576.  
 Stuart, D. C. 3170.  
 Stuart-Webb, J. 2091.  
 Studer, H. 1100, 3396, 3397.  
 Stürmer, E. 2063.  
 Sturrock, R. M. 2005, 3013, 3014, 3015.  
 Styk, B. 617.  
 Sugioka, Z. 4029.  
 Suiter, J. W. 1261.  
 Suito, E. 1800, 3617.  
 Sumita, Y. 1872.  
 Suneson, C. A. 1352.  
 Sutton, R. M. 2253.  
 Suzuki, A. 2554.  
 Suzuki, K. 3649.  
 Suzuki, T. 3607.  
 Svaetichin, G. 2672.  
 Svedmyr, A. 1982.  
 Swain, R. H. A. 2256, 2945.  
 Sweeney, W. T. 723.  
 Swensson, A. 426.  
 Swerdlow, M. 493, 1964, 2327, 2582, 3507, 3508, 3509.  
 Swineford, A. 199.  
 Syre, R. 3212, 3213.  
 Szabolcsi, G. 1915.  
 Szent-Györgyi, A. 2468, 2789, 2790, 2791, 3143, 3144, 3147.  
 Taber, D. A. 1618.  
 Taboada, M. Muñoz 26.  
 Tabuis, J. 357, 541.  
 Tacquet, A. 1298.  
 Tadano, B. 3624.  
 Tahmisian, T. N. 232, 233, 234, 235, 236.  
 Takada, Y. 3623.  
 Takagi, R. 1795.  
 Takahashi, M. 33, 3547.  
 Takahashi, N. 2638.  
 Takahashi, S. 1653, 1654.  
 Takahashi, T. 3584.  
 Takaishi, K. 4035, 4036, 4037, 4038, 4039, 4040.  
 Takamura, Jin-ichi 2595.  
 Takeshige, Y. 3521.  
 Takeuchi, S. 2641.  
 Takeyama, T. 2016, 3599.  
 Takiyama, K. 1800, 3540, 3541, 3542, 3543, 3544, 3545, 3546, 3547, 3548, 3560.  
 Takuma, S. 2348, 2349, 2350, 2351, 2352, 2353.  
 Tamamura, H. 2647.  
 Tamamushi, Bun-ichi 2422.  
 Tamm, I. 2865.  
 Tanabe, Y. 3608.  
 Tanaka, A. 4024, 4029.  
 Tanaka, C. 2421.  
 Tanaka, J. 2647.  
 Tanaka, S. 4034a, 4035, 4036, 4037, 4038, 4039, 4040.  
 Taoka, S. 2472.  
 Tateishi, M. 3525.  
 Tattersall, R. N. 3016, 3703.  
 Tchan, Y. T. 1326.  
 Tegawa, J. 4034a, 4035, 4036, 4037.  
 Teichner, S. 291, 292, 293, 2736.  
 Teuscher, G. W. 1936.  
 Thiery, J. P. 362, 363.  
 Thirsk, H. R. 462, 463.  
 Thjötta, T. 1845.  
 Thomas, J. B. 611.  
 Thompson, C. G. 1785.  
 Thornberry, H. H. 40.  
 Thornburg, W. L. 3877.  
 Thorpe, W. H. 761.  
 Thorsson, K.-G. 1982.  
 Thouvenot, H. 2884.  
 Thun, R. 441.  
 Tikhonenko, A. S. 2052, 2053, 2054.  
 Tikomirova, L. A. 3669.  
 Tischer, W. 1443.  
 Tischler, M. S. 976.  
 Tobin, J. Oh. 3040.  
 Toda, T. 3615.  
 Toduda, M. 1659.  
 Tokuyasu, K. 3612, 3615.  
 Tomii, T. 3647.  
 Tomita, A. 4021.  
 Tomita, H. 2600, 3584.  
 Tomlin, S. G. 625, 1798, 2322, 2867.  
 Torun, A. 1106.  
 Tousimis, A. J. 1057, 1663.  
 Treptow, K.-H. 2250.  
 Tretyakov, I. I. 3368.  
 Trillat, J.-J. 1891, 1892, 3601.  
 Tripp, V. W. 3121.  
 Troitzsch, H. 2172.  
 Trolan, J. K. 977.  
 Tsai, F. 3650.  
 Tsuchikura, H. 2068, 2350, 2351, 2352, 2353.

- Tsutsui, J. 2421.  
 Tufts, B. J. 2232, 2233.  
 Tulloch, G. S. 3350.  
 Tunbridge, R. E. 603, 1498.  
 Turkevich, J. 1262.  
 Turley, J. W. 717, 718.  
 Turner, E. S. 3878.  
 Tutihasi, S. 3626.  
 Tuynman, C. A. F. 3741.  
 Twai, Shin-ichi 2554.  
 Twiss, S. B. 3636.  
 Uchida, T. 3613.  
 Uchinoumi, Y. 2010.  
 Ueda, R. 3197, 3198, 3199, 3200.  
 Uerlings, I. 1855.  
 Uhl, M. 1181, 1182.  
 Ukai, H. 3620, 3622.  
 Ultée, A. J., Jr. 3270.  
 Urteaga B., O. 3898.  
 Usami, S. 3651.  
 Ussing, M. J. 3298, 3469.  
 Uyeda, N. 3538, 3548, 3549, 3550, 3551,  
 3552, 3553, 3554, 3555, 3556, 3557, 3558,  
 3559, 3560, 3561, 3562.  
 Vadász, J. 1486, 1852.  
 Vago, C. 2168.  
 Vallejo-Freire, A. 996, 3471, 3814.  
 Vanamee, P. 3828.  
 Van Antwerp, W. R. 3899.  
 van Breemen, V. L. 229, 230, 237, 1381.  
 Van Bronkhorst, A. 2327, 3400.  
 Vand, V. 819.  
 Vanderhoff, J. W. 25, 478, 478a.  
 van der Knaap, W. 3179.  
 Vandermeerssche, G. 840, 851, 852, 853,  
 1190, 3783.  
 Vander Merwe, J. H. 2064.  
 van der Scheer, C. 150, 2915.  
 Vander Want, J. P. H. 2915.  
 Vanderwinkel, E. 3884.  
 Van Grunderbeeck, F. 3805.  
 Van Iterson, W. 1760.  
 Vanpee, M. 3818, 3819.  
 Vanselow, R. 954.  
 van Slogteren, E. 2673.  
 Van Veelen, G. F. 3741.  
 Van Winkle, Q. 1737.  
 Varela, G. 64a, 65, 3809.  
 Vatter, A. E. 678, 1817, 1818.  
 Vatter, E. E. 492.  
 Vela, M. A. 768.  
 Verhoeff, A. 3733.  
 Verlinde, J. D. 468.  
 Vernon-Smith, S. 121, 2740.  
 Vertregt, N. 3664.  
 Vester, G. 3287.  
 Viets, H. R. 3074.  
 Vigier, P. 306, 1536, 2627.  
 Vitkuske, J. F. 478a.  
 Vogel, A. 3769, 3770.  
 Vogel, T. 445, 446, 447, 448.  
 Vogell, W. 1639, 1900.  
 Voisin, C. 1298.  
 Voisin, G. A. 3058.  
 Vold, R. D. 148, 149a, 3762.  
 Volpers, R. 3292.  
 Von Beust, F. 3398.  
 von Borries, B. 3225, 3226.  
 von Fischer, W. 429, 2869.  
 von Wettstein, D. 2189, 3514.  
 Vose, W. 2263.  
 Votava, E. 840.  
 Waddington, C. H. 3329.  
 Wagner, E. H. 2589.  
 Wagner, J. 1440.  
 Wagner, S. 688.  
 Wahl, R. 1323.  
 Wahli, H. R. 2116, 2117, 3986.  
 Wakô, M. 1236, 1237.  
 Walker, J. C. 2083, 2097, 3399.  
 Walker, T. K. 1899.  
 Wallace, G. I. 3879.  
 Wallhäuser, K.-H. 3661.  
 Walsh, A. 454, 3881.  
 Walter, F. 3488, 3489.  
 Ward, C. B. 1011.  
 Ward, J. P. 1962.  
 Ward, R. 2842.  
 Wardrop, A. B. 1712, 1713.  
 Warren, J. 542, 3178.  
 Warren, O. 148, 148c, 148d, 149, 149a,  
 318a, 2721.  
 Watabe, Y. 3652.  
 Watanabe, M. 1804, 3599.  
 Watanabe, Y. 2011.  
 Watson, J. H. L. 62a, 63, 64, 64a, 65,  
 2882, 2883, 3141.  
 Watson, M. L. 3097, 3098, 3940.  
 Watson, R. F. 3078.  
 Watts, J. 35, 1033.  
 Weaver, R. H. 466, 1432.  
 Weber, A. 214.  
 Weber, A. H. 66, 591, 3046, 3047.  
 Webster, J. 2367.  
 Wedderburn, C. C. 64a, 65, 3809.  
 Weickmann, H. H. 1874.  
 Weigle, J. J. 795, 2191.  
 Weil, R. 2947.  
 Weinman, J. A. 1196, 1197.  
 Weiser, H. B. 2418.  
 Weiser, R. S. 2552.  
 Weiss, A. 1070.  
 Weiss, E. 2488.  
 Weiss, J. M. 2885.  
 Wellington, E. G. 268.  
 Wengel, E. 3782.  
 Werner, G. H. 452a.  
 Werner, J. H. 1663.  
 Wersäll, J. 1043, 1046, 1047, 1048, 1049.  
 Wert, C. 1944, 2898.  
 Westermann, H. 2775, 2776, 2777.  
 Westfall, J. A. 2406.  
 Westphal, O. 3253.  
 Westphal, W. 1939.  
 Wever, F. 3248.  
 Whalen, M. M. 388, 389, 390.  
 Whewell, C. S. 2108.  
 White, J. C. 1031.  
 White, L. S. 2099, 2100.  
 Wiedemann, M. 3254.  
 Wiester, H.-J. 3874.  
 Wigand, R. 2568, 2752, 2753, 2754, 2755,  
 2756, 2757.  
 Wijnman, C. F. 3111.  
 Wilkens, M. J. 1081.  
 Wilkinson, G. R. 2930.  
 Wilkinson, J. F. 960, 2256, 3445.  
 Williams, H. J. 2574.  
 Williams, R. C. 103a, 104, 764, 1185,  
 1200, 1201, 2251, 3188, 3288, 3481, 3487.  
 Williamson, K. I. 1143, 3385.  
 Wilman, H. 2357.  
 Wilsdorf, H. 2064, 2065.  
 Wilson, D. F. 3316.  
 Winfield, M. E. 246.  
 Winsser, J. 3170.  
 Wintermyer, A. M. 1964.  
 Winterscheid, L. C. 2493, 2500, 2501.  
 Wislocki, G. B. 847, 848, 849.  
 Wohlfarth-Bottermann, K.-E. 2056, 2057,  
 2573, 2778.  
 Wolf, F. A. 3365.  
 Wood, J. L. 454.  
 Wood, M. J. 603.  
 Wood, W. A. 1261.

# WOODS

Woods, H. J. 1034, 1830, 2108, 2522, 2523,  
2707, 2917.  
Wright, B. A. 2737.  
Wright, C.-S. 3566.  
Wright, K. H. R. 185.  
Wrist, P. E. 1034, 1565.  
Wyburn, G. M. 815, 1736.  
Wyckoff, R. W. G. 410, 491, 765, 988, 1521,  
1750, 1950, 2077, 2078, 2079, 2468, 2469,  
2551, 2598, 2599, 2872, 3143, 3144, 3147,  
3148, 3149, 3297, 3298, 3299, 3300, 3301,  
3302, 3455, 3456, 3457, 3469.  
Wynne-Jones, W. 3662.  
Wyss, O. 2442.

Xalabarder, C. 3720.  
Xeros, N. 3457, 3458, 3459, 3460, 3461,  
3462, 3463.

Yada, K. 1654, 1655, 1656.  
Yager, R. H. 524.  
Yakovleva, M. E. 1069.  
Yamada, M. 719.  
Yamaguchi, A. 3623.  
Yamaguchi, Y. 3652.  
Yamaide, T. 3653.  
Yamamoto, K. 3606.  
Yamamoto, Y. 4030, 4031, 4033.  
Yamanaka, S. 1895.  
Yamanaka, T. 4032, 4033.  
Yanase, T. 2355.  
Yasuda, H. 3607.  
Yokoyama, J. 4033.  
Yokoyama, T. 3645.  
Yoshihara, F. 3995.  
Yoshioka, N. 3623.  
Yotsumoto, H. 3585.  
Youatt, J. B. 1529.  
Yu, S. P. 2478.

Zaffiro, P. 796.  
Zagar, L. 3289.  
Zaitsev, P. V. 3568.  
Zamecnik, P. C. 2225.  
Zampi, G. 3831.  
Zapater, R. C. 2292.  
Zapf, K. 2008.  
Zehender, E. 3159.  
Zelander, T. 1012.  
Zelle, M. R. 939.  
Zemlianova, L. I. 2072.  
Zetterquist, H. 3369, 3370.  
Zillig, W. 3223, 3224, 3251, 3252, 3255.  
Zimmer, K. 497.  
Zimmerman, L. H. 3638.  
Zischka, W. 517.  
Zollers, S. M. 3036.  
Zollinger, H. U. 2518.  
Zuppinger, A. 3790.  
Zych, Z. 1108, 1109.





# SUBJECT CLASSIFICATION

## --General--

**Bibliographies** 909, 2327, 2446, 2480, 2481, 3779, 3780.  
**Meetings and conferences** 55a, 86, 88, 278, 308, 653, 654, 720, 730, 733, 744, 817, 916, 957, 958, 1013, 1403, 1455, 1479, 1568, 1569, 2195, 2543, 2851, 2887, 2888, 2889, 2890, 2892, 3077, 3079, 3082, 3238, 3272.  
**Reviews and books** 22, 150, 241, 278, 343, 413, 536, 538, 576, 581, 646, 652, 727, 732, 734, 736, 737, 781, 804, 850, 860, 869, 871, 955, 992, 1154, 1208, 1211, 1215, 1252, 1253, 1277, 1329, 1354, 1384, 1390, 1403, 1461, 1478, 1495, 1510, 1514, 1566, 1567, 1574, 1594, 1658, 1664, 1796, 1797, 1827, 1837, 1911, 2140, 2166, 2358, 2374, 2665, 2795, 2801, 2810, 2844, 3074, 3120, 3164, 3166, 3173, 3306, 3323, 3404, 3405, 3425, 3526, 3529, 3530, 3573, 3583, 3656, 3736, 3737, 3742, 3771, 3777, 3778, 3960, 3978, 3983.  
**Other** 503, 579, 584, 1635, 1846, 2254, 3416, 3581, 3773, 3833, 3834, 3982.

## --Instrumentation--

### Electron microscopes

**Theoretical papers** 56, 71, 72, 74, 83, 172, 173, 269, 270, 271, 272, 273, 276, 324, 325, 326, 327, 328, 329, 330, 331, 332, 334, 335, 336, 433, 437, 439, 453, 525, 526, 527, 587, 597, 613, 650, 660, 661, 679, 738, 747, 752, 823, 824, 897, 934, 965, 966, 967, 968, 969, 970, 971, 986, 1018, 1024, 1137, 1272, 1273, 1274, 1292, 1311, 1312, 1313, 1327, 1330, 1331, 1332, 1333, 1334, 1335, 1336, 1337, 1338, 1399, 1404, 1405, 1406, 1407, 1408, 1409, 1433, 1434, 1435, 1436, 1437, 1438, 1439, 1440, 1477, 1478, 1481, 1484, 1494, 1520, 1604, 1689, 1690, 1802, 1803, 1813, 1814, 1815, 1875, 1876, 1878, 1879, 1880, 1881, 1924, 1931, 1984, 1992, 2006, 2007, 2073, 2094, 2103, 2104, 2105, 2107, 2118, 2119, 2134, 2135, 2136, 2137, 2139, 2141, 2145, 2146, 2194, 2196, 2197, 2200, 2217, 2219, 2220, 2221, 2255, 2328, 2329, 2361, 2412, 2413, 2435, 2437, 2589, 2696, 2935, 2938, 2941, 3017, 3018, 3043, 3122, 3163, 3228, 3230, 3291, 3339, 3341, 3342, 3345, 3346, 3382, 3383, 3396, 3502, 3524, 3559, 3671, 3680, 3713, 3774, 3829, 3839.

### Physical features

**Apertures** 222, 367, 397, 399, 428, 810, 1078, 1302, 1485, 1654, 1688, 2215, 2449, 2677.  
**Electron gun** 187, 394, 437, 613, 824, 927, 1022, 1481, 1672, 1794, 2435, 3490, 3491, 3525, 3563, 3593, 3844.  
**Lenses and polepieces** 70, 71, 72, 73, 74, 274, 275, 276, 330, 336, 406, 525, 526, 597, 598, 636, 638, 650, 679, 722a, 965, 966, 967, 968, 970, 971, 1063, 1137, 1138, 1232a, 1266, 1272, 1274, 1292, 1311, 1312, 1313, 1327, 1330, 1331a, 1334, 1410, 1439, 1477, 1485, 1511, 1520, 1654, 1665, 1666, 1668, 1681, 1813, 1814, 1815, 1875, 1878, 1893, 1894, 1961, 2093, 2094, 2103, 2104, 2118, 2119, 2134, 2135, 2136, 2137, 2139, 2142, 2143, 2146, 2196, 2198, 2199, 2216, 2217, 2255, 2433, 2475, 2544, 2696, 2938, 3017, 3018, 3028, 3029, 3030, 3031, 3043, 3163, 3201, 3230, 3290, 3318, 3339, 3340,

3341, 3342, 3343, 3382, 3383, 3387, 3393, 3523, 3671, 3680, 3732, 3779, 3829, 3843.  
**Power supply** 395, 404, 1383, 1960, 1961, 2147, 2542, 2693, 2695, 2697, 2698, 3035, 3584, 4054.  
**Stage** 34, 393, 405, 454a, 1505, 2150, 2325, 2722, 3159, 3525, 3848, 3899.  
**Vacuum systems** 434, 435, 682, 1259, 1260, 1355, 3564, 3961.  
**Effects of specimen on beam** 261, 287, 288, 290, 943, 1014, 1017, 1025, 1051, 1255, 1341, 1494, 1496, 1557, 1881, 1912, 1940, 2141, 2142, 2145, 2214, 2430, 2431, 2737, 2850, 2933, 2934, 2935, 2941, 3225, 3228, 3256, 3345, 3493, 3774, 3806, 3870, 3907, 4021.  
**Electron beam and image** 226, 277, 285, 287, 290, 333, 380, 436, 438, 527, 669, 945, 1014, 1205, 1494, 1496, 2026, 2138, 2152, 2329, 2331, 2696, 2936, 2937, 3291, 3443, 3952.  
**Electron diffraction instrumentation** 366, 490, 574, 710, 750, 1483, 1584, 1645, 1692, 1695, 1803, 2357, 2520, 2678, 3117, 3158, 3375, 3552, 3564, 3630, 3772, 3845.  
**General descriptions of electron microscopes** 186, 364, 402, 575, 725, 964, 1127, 1129, 1130, 1328, 1402, 1410, 1485, 1635, 1804, 2169, 2386, 2413a, 2433, 2676, 2940, 3031, 3033, 3035, 3036, 3160, 3162, 3165, 3177, 3237, 3318, 3559, 3568, 3583, 3599, 3630, 3707, 3730, 3733, 3742, 3743, 3775, 3838, 3841, 3865, 4053.  
**Hazards** 2883, 3817.  
**Installations** 367, 1158a, 1517.  
**Special types of electron microscopes** 186, 366, 441, 565, 639, 738, 739, 741, 747, 950, 951, 953, 954, 1014, 1032, 1127, 1128, 1131, 1138, 1139, 1140, 1174, 1279, 1355, 1469, 1482, 1503, 1578, 1579, 1794, 1911, 1957, 2006, 2007, 2071, 2268, 2330, 2362, 2387, 2434, 2436, 2537, 2538, 2539, 2540, 2590, 3032, 3117, 3158, 3161, 3231, 3307, 3347, 3400, 3446, 3526, 2772, 2776.  
**Other microscopes (x-ray, proton, reconstructed wave front)** 105, 489, 490, 595, 659, 735, 742, 743, 748, 836, 952, 1075, 1136, 1164, 1220, 1253, 1254, 1275, 1276, 1279, 1480, 1895, 1966, 2081, 2245, 2274, 2275, 2276, 2277, 2294, 2538, 2576, 2578, 2596, 2597, 2612, 2613, 2886, 2927, 3116, 3390, 3565, 3925.  
**Accessory devices**  
**Microtome mechanisms** 147, 377, 534, 536, 695a, 696, 980, 989, 990, 1115, 1267, 1268, 1294, 1304, 1456, 1457, 1504b, 1567, 1671, 1675, 1677, 1678, 1684, 1706, 1708, 1770, 2009, 2068, 2337, 2579, 2582, 2591, 2787, 2861, 2862, 3402, 3411, 3414, 3709, 3711, 3801, 3822, 3854.  
**Knives and accessories** 116, 297, 396, 400, 845, 1012, 1120, 1572, 1609, 1669, 1670, 1675, 2102, 2788, 3059, 3426, 3709.  
**Evaporators, freeze dryers, etc.** 52, 281, 709a, 808, 1205, 1231, 2035, 2794, 2805, 2814, 3034, 3198, 3426, 3906, 3911, 3953, 3961.

## --Techniques--

**Reviews** 958, 1027, 1132, 1577, 1715, 2164, 2385, 3830.  
**Specimen preparation**  
**Bacterial culture** 1, 48a, 156, 385, 1443,

1963, 2004, 2178, 2193, 2495, 2583, 2909,  
3258, 3259, 3717, 3876.  
Disintegration 1570, 3750.  
Dispersion 100, 100a, 101, 104, 202, 218a,  
251a, 283, 386, 619, 695, 763, 890, 903,  
1167, 1236, 1382, 1550, 1565, 1663, 1873,  
2067, 2172, 2249, 2340, 2601, 2671, 2704,  
3040, 3118, 3183, 3245, 3353, 3355, 3359,  
3361, 3394, 3911, 3953, 4015, 4020.  
Drying 49, 50, 51, 52, 52a, 53, 55, 58,  
296, 1057, 1117, 1200, 1860, 2458, 2599,  
3056, 3057, 3328, 3362, 3487, 3910, 3911.  
Embedding 148c, 149, 307, 383, 455a, 455b,  
1176, 1283, 1588, 1590, 2248, 2711, 2801,  
3287, 3328, 3821.  
Fixation 49, 51, 107, 113, 114, 115, 138,  
148a, 170, 204, 208, 211, 212, 307, 317,  
383, 530, 532, 535, 540, 766, 778, 939,  
973, 1283, 1348, 1472, 1687, 1844, 2074,  
2117, 2239, 2438, 2496, 2599, 2681, 2813,  
2814, 2864, 3048, 3131, 3151, 3265, 3328,  
3612, 3860, 3986.  
Fractionation 1442, 1943, 3253, 3308,  
3311, 3487, 3603, 3847.  
Microtomy 148, 148b, 149a, 297, 307, 396,  
532, 533, 534, 695a, 1013, 1018, 1117,  
1279a, 1282, 1283, 1284, 1303, 1304, 1324,  
1394, 1667, 1669, 1670, 1671, 1675, 1678,  
1682, 1683, 1770, 2011, 2337, 2338, 2463,  
2464, 2465, 2509, 2579, 2580, 2581, 2582,  
2788, 2862, 3132, 3133, 3411, 3423, 3424,  
3623, 3852, 3873, 3920, 3921.  
Mounting 102, 156, 202, 317, 480, 667a,  
731, 766, 809, 850, 955, 977, 1207, 1502,  
2405, 2557, 2613, 3359, 3405, 3522, 3921,  
4026.  
Precipitation 1240, 1416, 1573, 2234,  
2843.  
Replication 12, 81, 82, 95, 99, 248, 279,  
359, 365, 378, 391, 429, 481, 482, 484,  
485, 486, 487, 488, 541, 569, 623, 623a,  
624, 624a, 678, 708, 712a, 713, 718, 756,  
761, 773, 774, 775, 797, 813, 924, 926,  
964, 1104, 1133, 1150, 1157, 1160, 1161,  
1162, 1162a, 1163, 1241, 1242, 1243, 1244,  
1247, 1359, 1370, 1380, 1425, 1426, 1427,  
1443, 1470, 1492, 1516, 1560, 1561, 1605,  
1656, 1795, 1849, 1890, 1916, 1936, 1959,  
2012, 2072, 2098, 2153, 2154, 2286, 2351,  
2381, 2385, 2403, 2404, 2424, 2427, 2616,  
2617, 2618, 2636, 2708, 2728, 2762, 2775,  
2781, 2868, 2869, 3103, 3133, 3135, 3140,  
3216, 3247, 3257, 3258, 3259, 3275, 3317,  
3394, 3403, 3466, 3608, 3627, 3628, 3629,  
3654, 3655, 3685, 3696, 3903, 3998, 4002,  
4006, 4051.  
Shadowing 176, 248, 381, 635, 708a, 774,  
775, 835, 1159, 1186, 1243, 1427, 1647,  
1648, 1864, 1942, 2224, 2556, 2785, 2879,  
2880, 2881, 3305, 3635, 3690.  
Sputtering and evaporating 480, 481, 606,  
1029, 1135, 1458, 1610, 1729, 2032, 2905.  
Staining 111, 119, 142, 143, 144, 148a,  
206, 509, 554, 628, 847, 848, 914, 939,  
1496a, 1497, 1752, 1798, 1921, 2091, 2231,  
2584, 2741, 2928, 3061, 3072, 3093, 3151,  
3370, 3442, 3612, 3724, 3830, 3859.  
Supports (grids, screens, films, substrates)  
398, 479, 482, 612, 712a, 713, 837, 906,  
907, 910, 979, 1028, 1246, 1549, 1560,  
1728, 2617, 3041, 3054, 3118, 3243, 3349,  
3741, 3825, 3832.  
Surface preparation 94, 642, 716, 756,  
1110, 1423, 1428, 2675, 2775, 2779, 2907,  
3103, 3579, 3596, 3696, 3888.  
Tissue culture (organ cultures, transplants)  
361, 444, 458, 655, 892, 895, 896, 1305,  
1306, 1307, 1308, 1309, 1353, 1486, 1765,  
2018, 2322, 2417, 2549, 2550, 2593, 2634,  
2863, 3038, 3377.

Microscopy  
Alignment 397, 810, 1302, 2120, 2476, 3734.  
Calibration 93, 181, 460, 478a, 1023, 1025,  
1032, 1230, 1231, 1232, 1232a, 1299, 1301,  
1651, 1942, 1988, 2151, 2722, 3140, 3141,  
3358, 3405, 3793, 3811, 3812, 3903, 4000.  
Comparative microscopy (light and e.m.) 35,  
194, 237, 242, 316, 369, 458, 538, 551, 576,  
579, 584, 668, 754, 961, 1177, 1248, 1264,  
1306, 1307, 1309, 1331, 1397, 1558, 1700,  
1704, 1777, 1856, 1863, 1933, 1945, 2008,  
2043, 2155, 2230, 2235, 2310, 2387, 2407,  
2494, 2501, 2551, 2557, 2667, 2708, 2740,  
2806, 2809, 2927, 3121, 3229, 3404, 3442,  
3462, 3773, 3897, 3933, 3934, 3993b, 4046.  
Correction of image defects 828, 1517, 1518,  
1894, 1940, 2935, 2941, 3201.  
Counts and assays 93, 432, 562, 762, 763,  
937, 940, 941, 942, 1230, 1700, 1799, 1904,  
2106, 2144, 2176, 2234, 2251, 2427, 3094,  
3104, 3361, 3485, 3486, 3704, 3717, 3718,  
3805, 3916, 3921.  
Effects of beam on specimen 52b, 465, 591,  
641, 665, 850, 908, 955, 1025, 1155, 1156,  
1181, 1255, 1340, 1646, 1649, 1686, 1687,  
1723, 1876, 1877, 1879, 2027, 2029, 2033,  
2267, 2465, 2497, 3159, 3226, 3304, 3334,  
3684, 3815, 3821, 3842, 3871, 3907, 3962.  
Electron diffraction and microscopy (combined  
studies) 428a, 460, 528, 573, 709, 709a,  
738, 1024, 1026, 1144, 1460, 1576, 1581,  
1613, 1820, 1884, 2033, 2521, 2734, 2735,  
2793, 3129, 3157, 3301, 3551, 3787, 3808.  
Emission microscopy 97, 1786, 2577, 3731.  
Field locating 103a, 961, 1248, 1792, 2150,  
2264, 3732.  
Focusing 1484, 2402, 2452, 3039, 4003.  
Image recording 77, 384, 392, 401, 403, 562,  
669, 694, 759, 915, 945, 1050, 1159, 1376,  
1504a, 1507, 1512, 1513, 1517, 1518, 1587,  
1674, 1680, 1689, 1716, 1859, 1965, 2058,  
2059, 2332, 2623, 2720, 2786, 2882, 2933,  
3244, 3330, 3525, 3585, 3681, 3682, 3686,  
3753, 3774, 3815, 3816.  
Reflection microscopy 666, 1033.  
Resolution 277, 298, 433, 438, 598, 897,  
1023, 1133, 1175, 1240, 1484a, 1653, 1672,  
1674, 1680, 2119, 2120, 2170, 2215, 2228,  
2539, 2886, 3318, 3425, 3467, 3713, 3839,  
3840, 3844.  
Stereoscopy 52a, 57, 601, 1174, 1583, 1596,  
1599, 1606, 3159, 3366.

## --Biological Applications--

Artifacts 1628  
Biochemical substances  
Carbohydrates 39, 151, 251a, 255, 695, 714,  
1210, 1218, 1449, 1642, 1699, 1831, 2466,  
2516, 2865, 2918, 3114, 3190, 3277, 3379,  
3878.  
Lipids 1145, 1146, 1295, 1836, 2485, 3066.  
Proteins (lipoproteins) 30, 31, 107, 124,  
216, 239, 251a, 355, 427, 677, 719, 811,  
868, 992, 1076, 1166, 1167, 1178, 1179,  
1187, 1238, 1258, 1291, 1389, 1417, 1491,  
1493, 1524, 1551, 1643, 1660, 1703, 1739,  
1743, 1744, 1793, 1852, 1861, 1862, 2037,  
2336, 2345, 2394, 2419, 2439, 2479, 2507,  
2738, 2758, 2789, 2790, 2865, 2915, 3040,  
3078, 3145, 3176, 3194, 3250, 3253, 3262,  
3352, 3392, 3472, 3482, 3492, 3605, 3791,  
3823, 3828, 3846, 3860, 3879, 3881, 3882,  
3972, 3986, 4043.  
Enzymes 2, 242, 628, 1168, 1326, 1380, 1411,  
1412, 1498, 1541, 1912, 1941, 2129, 2439,  
2756, 3185, 3511, 3884, 3959.  
Nucleic acids (nuclear proteins) 3, 28, 224,  
427, 492a, 1188, 1201, 1547, 1866, 1867,  
2222, 2225, 2756, 3042, 3142, 3251, 3395,

- 3880, 3906, 3909.  
 Other 411, 695, 949, 960, 1172, 1188, 1817, 1818, 1869, 2447, 2506, 2552, 2928, 3401, 3807.
- Viruses**  
 General and reviews 167, 240, 615, 699, 1566, 1827, 2166, 2319, 2375, 2558, 2560, 2743, 2911, 3453, 3456, 3912, 3913, 3968, 3974, 3978, 3981.
- Animal**  
 General and reviews 164, 2165, 2376, 2916, 3354, 3451.  
 Arthropod-borne encephalitis 1221a, 2954, 2962, 2985.  
 Coxsackie group 523, 523a, 542, 2157, 3091.  
 Distemper group 2953.  
 Encephalomyelitis 1287, 1305, 2182, 2183, 2188, 2961, 3647.  
 Foot and mouth disease 284, 1052.  
 Herpes simplex 163, 724, 2454, 2456, 2457, 2459, 2460, 2461, 2545, 2971, 2998, 3037, 3038.  
 Herpes zoster and varicella 2039, 2040.  
 Influenza 3, 76, 168, 445, 446, 447, 448, 602, 617, 649a, 814, 937, 938, 988, 1104, 1108, 1109, 1149, 1166, 1202, 1537, 1538, 1614, 1771, 2062, 2171, 2458, 2467, 2549, 2550, 2705, 3044, 3364, 3625, 3708, 3782, 3866, 3971, 3980.  
 Measles none  
 Molluscum contagiosum 161, 162, 162a, 412, 2375, 2377, 2561, 2562, 2749.  
 Mumps 1659, 2945.  
 Myxoma 1054, 1055, 1077, 2226, 2585.  
 Newcastle disease 75, 165, 166, 649a, 1751, 1799, 1950, 2171, 2594, 2948, 2951, 2952, 2955, 2957, 2958, 2980, 2988, 2989, 2997, 3001, 3002, 3005, 3220, 3224, 3362.  
 Poliomyelitis 100, 1522, 1523, 2417, 2524, 2525, 2526, 2527, 2529, 2535, 2843, 2959, 2969, 2973, 2978, 2998, 2999, 3000, 3170, 3178, 3288, 3634.  
 Pleuropneumonia group 740, 767, 1446, 1663, 1993, 2192, 2193, 2804, 2972.  
 Pox group (ectomelia, canary pox, etc.) 163, 171, 468, 703, 981, 982, 1077, 1288, 1289, 1638, 1639, 1952, 1953, 1955, 2163, 2375, 2377, 2378, 2379, 2423, 2454, 2458, 2462, 2463, 2464, 2469, 2560, 2671, 2744, 2745, 2746, 2748, 2750, 2751, 2895, 2896, 2897, 2975, 3105, 3214, 3221, 3222, 3223, 3378, 3501, 3756, 3977, 3979.  
 Psittacosis and related agents 184, 241, 762, 1285, 2038, 2421, 2488, 3572.  
 Rabies 765, 1750, 2162, 2949, 2965, 2968, 2974, 2977, 2979, 2982.  
 Rubella none  
 Other 239, 675, 763, 764, 867, 884, 962, 1053, 1064, 1177, 1222, 1224, 1225, 1226, 1239, 1287, 1445, 1539, 1663, 1751, 1982, 2109, 2482, 2528, 2563, 2567, 2568, 2594, 2615, 2674, 2742, 2753, 2757, 2950, 2956, 2960, 2963, 2964, 2966, 2967, 2970, 2981, 2986, 2987, 2990, 2991, 2992, 2994, 2995, 3003, 3004, 3007, 3008, 3064, 3106, 3221, 3224, 3355, 3890, 3891, 3892, 3896.
- Bacterial**  
 General and reviews 54, 699, 1622, 1628, 1629, 1835, 1922, 2047, 2052, 2053, 2054, 2438, 2912, 3642, 3968, 3975, 4046.  
 Bacillus 633, 634, 1378, 1925, 3882.  
 Escherichia 54, 59, 103, 348, 368a, 369, 452, 561, 656, 826, 1200, 1358, 1548, 1616, 1620, 1621, 1623, 1624, 1625, 1626, 1630, 1634, 1919, 1920, 1923, 2037, 2077, 2078, 2177, 2178, 2179, 2251, 2270, 2350, 2401, 2470, 2494, 2599, 2909, 3142, 3499, 3648, 3676, 3849, 3918, 3919, 3969, 3970, 3976.  
 Salmonella 991, 1112, 1323, 1325, 1441, 2911, 3642, 3643, 3644, 3645, 3646, 3650, 3651, 3653.  
 Shigella 1836, 2471, 2909, 3642.  
 Other and miscellaneous 44, 96, 648, 664, 829, 1015, 1082, 1198, 1228, 1616, 1628, 1693, 1745, 1746, 2020, 2036, 2347, 2442, 2730, 2732, 3125, 3373, 3649, 3652, 3923.
- Insect**  
 General and review 262a, 3447, 3450, 3452, 3456, 3458, 3494.  
 Bollea (Polyhedrovirus) 263, 264, 265, 266, 267, 268, 387, 388, 389, 390, 820, 821, 1385, 1386, 1784, 2045, 2156, 2168, 2273, 2321, 2455, 3006, 3447, 3450, 3454, 3455, 3460, 3461, 3463, 3493, 3494, 3673, 3674, 3677, 3714, 3990, 3991, 3993, 3995.  
 Bergoldia (Capsulovirus) 263, 266, 267, 1782, 1783, 1785, 2243, 2321, 3450, 3493, 3495, 3799.  
 Smithia (Globovirus) 267, 3455, 3457, 3459.  
 Morator (Moratorvirus) 2625, 3798.  
 Unassigned 262a, 387, 492, 1385, 1386, 3462, 3715, 3992.
- Plant**  
 General and reviews 430, 726, 1245, 1834, 1841, 2610, 3057, 3480.  
 Mosaic disease 40, 218a, 220, 221, 409, 410, 431, 494, 496, 719, 745, 799, 825, 903, 940, 941, 1062, 1185, 1321, 1349, 1350, 1351, 1454, 1541, 1547, 1829, 1832, 1833, 1983, 2021, 2022, 2079, 2083, 2097, 2167, 2585, 2586, 2588, 2673, 3056, 3249, 3251, 3252, 3254, 3255, 3337, 3365, 3399, 3436, 3448, 3449, 3478, 3484, 3486, 3487, 3602, 3603, 3604, 3605, 3744, 3745, 3791, 3907, 3908, 3916, 3917, 3922.  
 Yellow disease 221, 409, 491, 492, 497, 2186, 2673, 3449, 3915.  
 Unassigned 430, 432, 1352, 2083, 2202, 2587, 2703, 2893, 3104, 3338, 3435, 3476, 3477, 3479, 3784, 3872, 4013.
- Tumor**  
 General and reviews none  
 Virus-like particles, associated with neoplasia 90, 166a, 169, 219, 295, 299, 302, 303, 306, 308, 314, 318, 882, 929, 929a, 930, 931, 1060, 1184, 1285a, 1286, 1418, 1476, 1737, 1767, 1962, 2531, 2532, 2536, 2627, 2628, 2632, 2634, 2700, 2701, 2702, 3320, 3327, 3984.  
 Avian erythroblastic leucosis 240, 987, 1380, 1536, 3356, 3357, 3360, 3362, 3363.  
 Papilloma 298, 314, 596, 1865, 2377, 2380, 2871, 2984.  
 Warts 3506.
- Rickettsia** 184, 413, 972, 1898, 1956, 2044, 2046, 2754, 2976, 3504, 3876, 3893, 3898, 3938.
- Bacteria**  
 General and reviews 191, 1615, 1827, 2048, 2049, 2050, 2051, 2190, 2289, 2319, 2490, 2493, 3057, 3218, 3718, 3934.
- Schizomycetes**  
 Actinomycetaceae 152, 153, 552, 920, 1039, 1173, 2260, 2288, 3754.  
 Mycobacteriaceae 62, 155, 189, 190, 191, 192, 193, 195, 196, 442, 517, 543, 544, 545, 546, 547, 550, 553, 668, 771, 904, 1038, 1183, 1298, 1339, 1365, 1374, 1468, 1571, 2004, 2023, 2024, 2058, 2059, 2158, 2212, 2213, 2287, 2291, 2500, 2546, 2669, 2731, 2732, 3127, 3128, 3168, 3174, 3175, 3271, 3379, 3380, 3381, 3481, 3606, 3641, 3661, 3716, 3987, 3988, 3989.  
 Nitrobacteriaceae 1010, 1011.

- Pseudomonadaceae 46, 1003, 1141, 1249, 2583, 3045, 3725.
- Spirillaceae 382, 1147, 1148, 1366, 2252, 3126, 3188, 3668, 4043.
- Coccaceae 767, 816, 818, 1310, 1430, 1431, 1746, 1941, 1943, 2092, 2670, 3123, 3184, 3437, 3438, 3666, 3895, 4012, 4039.
- Bacteriaceae 103, 368a, 369, 414, 466, 521, 551, 554, 556, 557, 558, 616, 796, 806, 827, 959, 1005, 1324, 1326, 1353, 1429, 1432, 1447, 1542, 1545, 1546, 1617, 1679, 1753, 1850, 1851, 1917, 1918, 1921, 1924, 2074, 2177, 2190, 2253, 2256, 2271, 2272, 2401, 2494, 2499, 2564, 2706, 2849, 2912, 2913, 2914, 3055, 3235, 3236, 3253, 3256, 3372, 3376, 3444, 3445, 3697, 3735, 4036, 4037, 4038, 4044, 4045.
- Bacillaceae 180, 188, 452a, 522, 548, 594, 656, 663, 1168, 1169, 1466, 1754, 1805, 1845, 1954, 2269, 2548, 2584, 3092, 3115, 3188, 3386, 3759, 3847, 3884, 3889, 4007, 4034a, 4040.
- Spirochaetes 64a, 65, 98, 476, 524, 590, 769, 770, 978, 1391, 1392, 2158, 2252, 2429, 2483, 2484, 3234, 3239, 3571, 3809.
- Miscellaneous bacteria 555, 614, 697, 960, 1310, 1521, 1529, 1570, 1627, 1631, 1754, 1756, 1759, 1844, 1899, 1906, 2191, 2230, 2252, 2253, 2290, 2482, 2560, 2566, 2754, 2755, 2757, 2884, 2910, 3173, 3505, 3879, 3893, 3894, 3898, 4012, 4035.
- ### Cytology
- General and reviews 60, 154, 170, 310, 415, 474, 516, 537, 681, 720, 728, 781, 1058, 1211, 1215, 1306, 1475, 2114, 2115, 2210, 2300, 2374, 2508, 2513, 2630, 2812, 2844, 2855, 2859, 2860, 2916, 2928, 3321, 3422, 3425, 3788, 3790, 3914, 3943, 3985.
- ### Animal
- Nucleus (general) 28, 62a, 63, 117, 136, 168, 201, 210, 301, 313, 389, 456, 456a, 625, 662, 670, 863, 1102, 1122, 1152, 1188, 1256, 1280, 1281, 1318, 1319, 1373, 1475, 1543, 1553, 1902, 1982, 3156, 3441, 3613, 3823, 3824, 4018, 4029, 4031.
- Cytoplasm (general) 135, 1122, 1281, 3322, 3326.
- Chromosomes, mitotic figures 229, 230, 249, 408, 455, 588, 794, 795, 854, 855, 856, 857, 858, 859, 861, 862, 864, 883, 1280, 1294, 1448, 1637, 1763, 1764, 3076, 3148, 3265, 3267, 3320, 3675, 3746, 3747, 3748, 3974, 4016, 4017, 4020, 4021, 4023, 4026, 4027, 4030, 4033.
- Cytoplasm, particulate components, (including mitochondria) 6, 15, 124, 134, 138, 145, 146, 168, 177, 202, 213, 232, 233, 234, 236, 310, 353, 379, 419, 474, 519, 649, 670, 680, 689, 693a, 779, 783, 784, 786, 787, 889a, 919, 1059, 1074, 1074a, 1081, 1088, 1204, 1222, 1225, 1226, 1257, 1264, 1265, 1271, 1296, 1315, 1316, 1344, 1345, 1346, 1347, 1348, 1372, 1379, 1471, 1535, 1537, 1540, 1555, 1573, 1986, 2090, 2108, 2113, 2116, 2225, 2242, 2518, 2620, 2626, 2629, 2630, 2631, 2634, 2637, 2666, 2680, 2682, 2684, 2685, 2686, 2687, 2689, 2690, 2691, 2811, 2852, 2853, 2854, 2855, 2856, 2863, 3011, 3070, 3134, 3176, 3369, 3412, 3427, 3428, 3430, 3431, 3439, 3440, 3441, 3613, 3665, 3678, 3835, 3836, 3837, 3855, 3858, 3940, 3943.
- Golgi apparatus, centriole 782, 788.
- Endoplasmic reticulum 872, 3804.
- Cytoplasm, fibrillar components, (except myofibrils, neurofibrils) 140, 309, 311, 379, 564, 627, 785, 1225, 1226, 1265, 1271, 1296, 1372, 1471, 1473, 2261, 2360, 2441, 2629, 2633, 2637, 2689, 2737, 2852, 2855, 2856, 2946, 3070, 3266, 3428, 6431, 3432, 3434, 3951, 3973.
- Cell membrane (wall) 87, 134, 411, 564, 711, 849, 865, 1041, 1091, 1092, 1093, 1459, 1582, 1685, 1778, 1821, 1903, 1989, 1991, 2080, 2240, 2420, 2474, 2685, 2815, 2828, 2830, 3020, 3049, 3088, 3609, 3616, 3728, 3954.
- Cilia and flagella 373, 474, 531, 572, 798, 1040, 1046, 1089, 1091, 1092, 1093, 1126, 1269, 1369, 1714, 1715, 1801, 1951, 1990, 2306, 2309, 2406, 2519, 2731, 2829, 2866, 2867, 3153, 3312, 3679, 3719, 3941, 3946, 3947, 3948, 3949, 3950, 3965.
- ### Plant
- General bacterial cytology 46, 99, 180, 190, 385, 407, 475, 495, 498, 521, 545, 548, 663, 796, 806, 826, 887, 920, 959, 1005, 1010, 1011, 1169, 1173, 1214, 1324, 1366, 1430, 1431, 1466, 1467, 1524, 1548, 1627, 1631, 1679, 1687, 1758, 1760, 1805, 1850, 1851, 1918, 1919, 1920, 1924, 1927, 2008, 2048, 2049, 2050, 2051, 2077, 2133, 2253, 2271, 2293, 2318, 2326, 2484, 2491, 2492, 2496, 2498, 2849, 2915, 2922, 3075, 3093, 3168, 3188, 3235, 3236, 3258, 3372, 3376, 3444, 3445, 3505, 3511, 3676, 3678, 3697, 3712, 3738, 3759, 3809, 3885, 3894, 3932, 3933, 3934, 4011, 4036, 4045.
- Nucleus (general) 190, 407, 475, 1004, 1216, 1326, 1927, 2008, 2133, 3092, 3219, 3500, 3751, 3936, 3993, 4032.
- Chromosomes, mitotic figures 182, 1586, 2318, 2319, 3316, 3500, 3984.
- Cytoplasm, particulate components (including mitochondria) 36, 469, 571, 1210, 1216, 1548, 2491, 2493, 2501, 2733, 2870, 3095, 3149, 3219, 3314, 3473, 3475, 3877, 3935.
- Cytoplasm, fibrillar components 36, 1212, 1530, 1532, 3475.
- Cell membrane (wall) 8, 13, 151, 181, 549, 818, 898, 899, 901, 902, 918, 1006, 1007, 1008, 1218, 1531, 1533, 1712, 1713, 1758, 1761, 1762, 2075, 2181, 2202, 2227, 2414, 2415, 2440, 2502, 2504, 2505, 2508, 2512, 2515, 2611, 2648, 2875, 2876, 2878, 2923, 2925, 3052, 3092, 3093, 3107, 3108, 3111, 3112, 3113, 3114, 3149, 3185, 3186, 3187, 3189, 3407, 3408, 3483, 3615, 3754, 3767, 3885, 3886, 3959, 4008, 4034a, 4035, 4036, 4037, 4038, 4039, 4040, 4052.
- Cilia and flagella 87, 91, 498, 672, 887, 1126, 1147, 1148, 1366, 1755, 1760, 2075, 2076, 2180, 2293, 2300, 2301, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2367, 2802, 2849, 3075, 3444, 3481, 3505, 3571, 3633, 3720, 3735, 3846.
- Chloroplasts and chromoplasts 14, 611, 626, 698, 751, 830, 1002, 1219, 1585, 1586, 1705, 1709, 1710, 1711, 1817, 1818, 2184, 2185, 2186, 2187, 2189, 2398, 2514, 2517, 2699, 3180, 3181, 3474, 3488, 3489, 3496, 3497, 3498, 3514, 3663, 3664, 3691, 3781, 3955, 3956, 3957.
- ### Histology
- General and reviews 2812.
- ### Animal
- Special structures, cells, and organs of
- Protozoa 45, 87, 130, 134, 135, 136, 137, 375, 376, 469, 472, 473, 531, 559, 560, 572, 672, 800, 831, 832, 833, 834, 865, 866, 885, 922, 923, 947, 948, 1083, 1147, 1148, 1251, 1453, 1499, 1500, 1501, 1508, 1543, 1589, 1601, 1602, 1603, 1730, 1731, 1732, 1733, 1755, 1757, 1821, 1990, 1991, 2041, 2056, 2057, 2115, 2247, 2248, 2314, 2406, 2410, 2519, 2573, 2866, 2946, 3152, 3153, 3154, 3155, 3276, 3313, 3314, 3315, 3331, 3332, 3614, 3719, 3941, 3942, 3944,

3948, 3949, 3956.  
 Sponges (Porifera) none  
 Coelenterates and Ctenophora 3331.  
 Worms (Platyhelminthes, Nemathelminthes,  
 Trochhelminthes) 879.  
 Echinoderms 673, 1387, 1903, 2261, 2262,  
 2472, 3610, 3611.  
 Mollusks, Bryozoa, and Brachiopoda 3250.  
 Arthropods 227, 231, 234, 235, 662, 791,  
 792, 851, 852, 853, 905, 994, 995, 1774,  
 1775, 1776, 1785, 2088, 2095, 2218,  
 2320, 2396, 2747, 2760, 2787, 3062,  
 3063, 3510, 3632, 3678, 3699, 3700,  
 3701, 3702, 3993a.  
 Chordates none  
 Cell cultures (fibroblasts, ascites, HeLa)  
 1224, 1307, 1320, 1765, 3920.  
 Various normal cells and tissues none  
 Various experimentally altered and patholog-  
 ical cells and tissues 1054, 1055, 3607.  
 Various neoplastic cells and tissues 300,  
 1221a, 3322.  
 Organs and tissues  
 Blood (cells and platelets)  
 Normal 16, 17, 18, 19, 20, 21, 23, 24,  
 251, 294, 304, 312, 315, 317, 339,  
 340, 341, 342, 343, 344, 345, 349,  
 350, 351, 352, 354, 355, 356, 358,  
 359, 360, 363, 416, 417, 419, 421,  
 426, 499, 500, 501, 502, 504, 505,  
 506, 507, 519, 520, 592, 829a, 868,  
 874, 893, 946, 973, 1052, 1095, 1107,  
 1179, 1318, 1319, 1356, 1385, 1386,  
 1395, 1396, 1472, 1534, 1643, 1685,  
 1778, 1780, 1781, 1788, 1853, 1854,  
 1856, 1857, 1861, 1901, 1989, 2080,  
 2101, 2416, 2428, 2479, 2716, 2806,  
 2807, 2808, 2811, 2813, 2814, 2834,  
 2845, 2846, 2847, 2982, 3010, 3011,  
 3012, 3044, 3068, 3124, 3146, 3229,  
 3250, 3391, 3566, 3695, 3698, 3803,  
 3804, 3958, 4014, 4022, 4028, 4031,  
 4042.  
 Experimentally altered and pathological  
 16, 23, 57, 192, 194, 342, 345, 348,  
 353, 356, 357, 416, 417, 447, 448,  
 502, 506, 507, 510, 513, 518, 592,  
 671, 882, 884, 885, 946, 1107, 1186,  
 1258, 1317, 1452, 1459, 1582, 1788,  
 1855, 2005, 2171, 2356, 2428, 2439,  
 2525, 2528, 2529, 2530, 2534, 2742,  
 2752, 2821, 2836, 2848, 2958, 2962,  
 2965, 2969, 2973, 2975, 2979, 2983,  
 2986, 2987, 2993, 2996, 3013, 3014,  
 3015, 3123, 3566, 3756, 3889.  
 Neoplastic 23, 305, 345, 346, 347,  
 359, 362, 363, 507, 881, 1418, 2532,  
 2533, 2536, 2626, 2631, 2632, 2836,  
 3363, 3510.  
 Bone and cartilage  
 Normal 80, 81, 82, 174, 217, 243,  
 1193, 1715, 1773, 1811, 1926, 2266,  
 2323, 2324, 2575, 2621, 3096, 3097,  
 3098, 3135, 3136, 3138, 3172, 3803,  
 3827, 3900, 4047, 4048.  
 Experimentally altered and pathologic  
 1871, 1971, 2621, 2944, 3900, 3905.  
 Neoplastic 352.  
 Cardio-vascular system  
 Normal 320, 321, 322, 509, 516, 1362,  
 1364, 1498, 1967, 1968, 1969, 1971,  
 1972, 1973, 1975, 1976, 1977, 1978,  
 2125, 2208, 2683, 2835, 2885, 3049,  
 3281, 3284, 3429, 3856.  
 Experimentally altered and pathologic  
 3016, 3468.  
 Neoplastic none  
 Connective tissue (serous membranes  
 collagen fibers)  
 Normal 78, 80, 107, 108, 109, 110, 118,  
 125, 126, 127, 128, 129, 139, 141, 142,  
 143, 144, 157, 158, 159, 159a, 160,  
 209, 238, 255, 257, 337, 373, 424, 443,  
 599, 603, 604, 822, 911, 912, 913,  
 1067, 1189, 1238, 1360, 1363, 1375,  
 1376, 1411, 1413, 1414, 1415, 1416,  
 1417, 1633, 1660, 1661, 1723, 1724,  
 1773, 1798, 1809, 1810, 1811, 1812,  
 1863, 1872, 1904, 1913, 1914, 1935,  
 1970, 1981, 2089, 2096, 2121, 2122,  
 2125, 2126, 2127, 2129, 2130, 2131,  
 2132, 2175, 2206, 2211, 2223, 2295,  
 2323, 2393, 2477, 2547, 2569, 2572,  
 2598, 2679, 2737, 2851, 2872, 2929,  
 2930, 2931, 3051, 3078, 3079, 3097,  
 3098, 3119, 3137, 3164, 3169, 3242,  
 3277, 3278, 3279, 3280, 3283, 3284,  
 3319, 3470, 3508, 3521, 3575, 3576,  
 3674, 3703, 3726, 3800, 3828, 3863,  
 3864, 3931, 3945, 3974, 4015.  
 Experimentally altered and pathologic  
 120, 1826, 1872, 1913, 2123, 2124,  
 2533, 2571, 2822, 2825, 3016, 3058,  
 3931.  
 Neoplastic 157, 361, 1086, 2126, 2128,  
 2209, 2626, 2631.  
 Embryonic tissues, membranes  
 Normal 160, 457, 467, 677, 844, 849,  
 1293, 1902, 2116, 2547, 3326, 3860,  
 3986.  
 Experimentally altered and pathologic  
 163, 164, 165, 166, 171, 988, 1950,  
 2457, 2469, 2549.  
 Neoplastic none  
 Endocrine glands and placenta  
 Normal 311, 467, 508, 514, 516, 627,  
 776, 783, 846, 849, 1071, 1072, 1073,  
 1074, 1074a, 1381, 2011, 2173, 2174,  
 2335, 2360, 2441, 2614, 2625, 3070,  
 3072, 3789, 3790, 3831, 3862, 3936,  
 3937.  
 Experimentally altered and pathologic  
 846, 1073, 2174, 2335, 3790.  
 Neoplastic 1474, 2625.  
 Gastro-intestinal system (pancreas, sali-  
 vary glands, etc.)  
 Normal 539, 657, 676, 776, 778, 779,  
 780, 789, 790, 995, 1271, 1369, 1774,  
 1776, 2320, 3090, 3415, 3430, 3432,  
 3632, 3665, 3804, 3823, 3858, 3860,  
 3861.  
 Experimentally altered and pathologic  
 2207, 2334, 3091, 3859.  
 Neoplastic 2792.  
 Liver (gall bladder and ducts)  
 Normal 62a, 309, 311, 313, 509, 512,  
 618, 779, 790, 1016, 1087, 1088, 1090,  
 1103, 1315, 1474, 1668, 1768, 1987,  
 2011, 2210, 2338, 2466, 3441, 3802,  
 3835, 3836, 3993b.  
 Experimentally altered and pathologic  
 711, 1017, 1987.  
 Neoplastic 301, 1474, 1768, 1769.  
 Lymphatic system, spleen, thymus, etc.  
 Normal 140, 255, 256, 312, 511, 1737,  
 2716, 3674, 3958.  
 Experimentally altered and pathologic  
 61, 2822, 2944.  
 Neoplastic 305, 1737.  
 Mammary gland and milk  
 Normal 215, 216, 1419, 1420, 1738,  
 1739, 1740, 1741, 1742, 1744, 1793,  
 2249, 2485, 3567.  
 Experimentally altered and pathologic  
 1743, 3320.  
 Neoplastic 299, 302, 928, 929a, 930,  
 1419, 1767, 1962, 2701, 2702, 3770.  
 Muscle, myofibrils, etc.

Normal 32, 84, 85, 86, 209, 258, 260, 321, 449, 629, 662, 949, 993, 994, 996, 997, 998, 999, 1000, 1001, 1080, 1291, 1526, 1527, 1540, 1563, 1564, 1702, 1703, 1704, 1707, 1789, 1790, 1791, 1970, 1972, 1974, 1978, 2208, 2444, 2468, 2688, 2738, 2739, 2787, 2789, 2790, 2791, 2803, 2857, 2885, 3019, 3087, 3145, 3147, 3167, 3191, 3429, 3472, 3721, 3722, 3853, 3855, 3856.  
 Experimentally altered and pathologic 31, 32, 1806, 2445.  
 Neoplastic 1586.  
 Nervous system  
 Normal 2, 123, 203, 204, 205, 207, 212, 213, 214, 218, 228, 237, 259, 647, 793, 815, 847, 867, 870, 872, 873, 875, 876, 877, 878, 879, 880, 886, 888, 889, 889a, 891, 892, 894, 895, 896, 963, 1065, 1066, 1113, 1114, 1115, 1116, 1118, 1119, 1121, 1122, 1145, 1146, 1250, 1293, 1295, 1296, 1535, 1552, 1553, 1554, 1555, 1640, 1641, 1736, 1822, 2018, 2155, 2159, 2160, 2359, 2160, 2359, 2408, 2409, 2688, 2692, 2717, 2720, 3019, 3084, 3085, 3086, 3087, 3088, 3089, 3143, 3144, 3241, 3409, 3410, 3413, 3420, 3421, 3666a, 3672, 3723, 3724, 3752, 3830.  
 Experimentally altered and pathologic 1555, 2409, 3641.  
 Neoplastic none  
 Reproductive system, female (ducts, ovary, ova, uterus)  
 Normal 9, 337, 794, 935, 936, 1257, 1662, 1903, 2261, 2262, 2472, 2474, 2637, 2842, 3610, 3612, 3954, 3994.  
 Experimentally altered and pathologic 673, 2207, 3769, 3994.  
 Neoplastic 1308  
 Reproductive system, male (testes, auxiliary glands, ducts, spermatozoa)  
 Normal 7, 223, 225, 232, 233, 319, 450, 515, 529, 600, 651, 688, 785, 787, 1084, 1085, 1152, 1221, 1223, 1227, 1290, 1393, 1519, 1528, 1691, 1779, 1838, 2244, 2668, 2932, 3265, 3266, 3329, 3616, 3820, 3966, 3967, 4019.  
 Experimentally altered and pathologic 515, 1838.  
 Neoplastic none  
 Respiratory system (lungs, gills)  
 Normal 235, 423, 684, 685, 686, 687, 851, 852, 853, 961, 1040, 1538, 1885, 1886, 1973, 2237, 2239, 2240, 2241, 2364, 2365, 2819, 2820, 2824, 2826, 2829, 2831, 3050, 3063, 3232, 3577, 3679, 3821.  
 Experimentally altered and pathologic 804, 921, 988, 1031, 1371, 1445, 1847, 1885, 1948, 1949, 2031, 2764, 2768, 2816, 2817, 2818, 2822, 2827, 2832, 2833, 2837, 2944, 3067, 3233.  
 Neoplastic none  
 Sensory organs  
 Normal 67, 68, 69, 112, 131, 132, 133, 420, 422, 630, 691, 692, 1042, 1045, 1047, 1048, 1049, 1125, 1146, 1190, 1397, 1398, 1417, 1801, 1823, 1824, 1825, 1981, 2210, 2316, 2345, 2346, 2354, 2555, 3133, 3196, 3262, 3278, 3279, 3282, 3285, 3286, 3308, 3309, 3310, 3311, 3410, 3417, 3418, 3419, 3421, 3657, 3726, 3727, 3728, 3729, 3867, 3868.  
 Experimentally altered and pathologic 369, 3021, 3196, 3657.  
 Neoplastic none  
 Skin, annexes, exoskeleton, skin glands  
 Normal 5, 89, 177, 712, 791, 792, 1019, 1044, 1067, 1354, 1377, 1388, 1726, 1914, 2084, 2085, 2086, 2089, 2211, 2218, 2296, 2369, 2394, 2489, 2570, 2672, 2709, 2725, 2747, 2760, 2784, 2858, 2930, 3020, 2062, 3276, 3286, 3324, 3325, 3326, 3350, 3398, 3508, 3667, 3699, 3700, 3701, 3703, 3750, 3863, 3864, 3965, 3993a.  
 Experimentally altered and pathologic 120, 154, 724, 2369, 2370, 2563, 3105, 3703, 3768, 3979.  
 Neoplastic 162, 162a, 412, 425, 712, 2369, 2871, 3506, 3770.  
 Teeth and gingiva  
 Normal 79, 318a, 1191, 1192, 1194, 1600, 1936, 2148, 2348, 2349, 2351, 2353, 2383, 2384, 2710, 3096, 3138, 3294, 3295, 3296, 3297, 3298, 3299, 3300, 3302, 3385, 3469, 3579, 3618, 3619, 3622, 3623, 3826, 4025  
 Experimentally altered and pathologic 1192, 1194, 1195, 1598, 2148, 2149, 2348, 2349, 2350, 2352, 2353, 3296, 3301, 3619, 3620, 3621.  
 Neoplastic none  
 Urinary system  
 Normal 148d, 234, 252, 298, 777, 778, 789, 790, 1167, 1269, 1270, 1487, 1488, 1489, 1490, 1934, 2088, 2635, 2712, 2713, 2714, 2715, 2718, 2719, 2721, 2823, 2838, 2839, 3022, 3048, 3049, 3069, 3071, 3073, 3182, 3433, 3434, 3792, 3802, 3859, 3993c.  
 Experimentally altered and pathologic 2798, 3048.  
 Neoplastic none  
 Plant  
 Thallophyta (fungi, yeast, algae) 12a, 13, 14, 91, 179, 181, 182, 411, 464, 470, 471, 473, 487, 549, 626, 898, 899, 900, 901, 902, 1043, 1251, 1499, 1500, 1501, 1525, 1589, 1601, 1602, 1603, 1611, 1612, 1755, 1761, 1915, 1930, 2181, 2227, 2229, 2292, 2302, 2303, 2306, 2309, 2311, 2312, 2367, 2440, 2506, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2876, 3102, 3107, 3189, 3260, 3401, 3488, 3639, 3640, 3667, 3694, 3793, 3955, 4008, 4009, 4010.  
 Bryophyta (mosses) 1068, 2308.  
 Pteridophyta (ferns) 1235, 2878.  
 Spermatophyta (flowering plants) 773, 1006, 1007, 1008, 1009, 1150, 1530, 1531, 1532, 1533, 1585, 1619, 2201, 2502, 3797, 3869.  
 Members  
 Root 2510, 3095, 3149, 3796.  
 Leaf 1235, 2510.  
 Stem 459, 1009, 1217, 1235, 1619, 2201, 2203, 2204, 2205, 2366, 2510, 3749, 3794, 3796, 3797, 3869.  
 Reproductive system 8, 10, 1061, 1123, 2227, 2305, 2307, 2311, 2367, 2507, 2511, 2515, 3202, 3406.  
 --Non-biological applications--  
 Solid surfaces  
 Poly-crystalline metals  
 General applications in metallurgy 27, 247, 248, 262, 371, 391, 462, 563, 582, 690, 729, 739, 749, 775, 953, 1020, 1182, 1243, 1278, 1402, 1423, 1424, 1426, 1427, 1461, 1463, 1577, 1807, 2014, 2015, 2278, 2279, 2389, 2638, 2675, 2740, 2779, 2796, 2799, 2841, 2908, 2943, 3024, 3204, 3210, 3274,



3344, 3347, 3631, 3785, 3851, 3888, 3926.  
 Ferrous metals 11, 12, 37, 66a, 94, 97,  
 483, 589, 605, 645, 700, 701, 704, 706,  
 755, 1021, 1161, 1163, 1165, 1196, 1244,  
 1300, 1368, 1428, 1451, 1462, 1464, 1465,  
 1503, 1579, 1896, 1944, 1958, 2015, 2055,  
 2258, 2282, 2368, 2426, 2448, 2616, 2619,  
 2638, 2729, 2780, 2898, 3118, 3130, 3197,  
 3206, 3246, 3247, 3248, 3631, 3636, 3637,  
 3638, 3693, 3710, 3810, 3874, 3875, 3883,  
 3904, 4034.  
 Non-ferrous metals  
 Copper base 637, 772, 807, 842, 843,  
 1099, 1244, 1819, 1868, 2065, 2072,  
 2473, 2643, 2644, 2646, 2905, 2907,  
 3207, 3208, 3212, 3240, 3273, 3595,  
 3598, 3601, 3813, 3850, 3928.  
 Aluminum base 262, 566, 570, 593, 607,  
 608, 609, 610, 637, 640, 642, 643, 644,  
 757, 1139, 1261, 1575, 1787, 1929, 1932,  
 1979, 2016, 2042, 2064, 2065, 2236,  
 2278, 2473, 2595, 2602, 2840, 3204,  
 3205, 3208, 3209, 3211, 3212, 3598,  
 3601, 3631, 3814, 3927, 3928, 3929.  
 Miscellaneous alloys (including magnetic  
 121, 254, 280, 593, 722, 926, 1576,  
 1580, 1929, 2065, 2069, 2382, 2574,  
 3213, 3997.  
 Miscellaneous pure metals 183, 377a,  
 378, 1094, 1297, 1692, 1786, 1843, 2386,  
 2565, 2609, 2906, 2947, 3009, 3179,  
 3216, 3593, 3850, 3926.  
 Metal single crystals  
 1544b, 1694, 2382, 2422, 2473, 3532, 3554,  
 3556, 3557, 3690, 3996, 3999, 4005.  
 Glasses (including glazes, porcelains, etc.)  
 66, 372, 374, 577, 580, 583, 584, 585,  
 586, 1069, 1556, 1939, 2028, 2154, 2873,  
 3171, 3289, 3371, 3578, 3654, 3655.  
 Crystalline solids (other than metals)  
 Ceramics (see also soils and clays) 917,  
 1322, 1796, 1884, 2019, 2777, 2781,  
 3150, 3384.  
 Metallic oxides, carbides, nitrides, etc.  
 254, 283, 286, 289, 454, 461, 573, 678,  
 723, 729, 746, 750, 760, 840, 940, 942,  
 985, 1097, 1098, 1158, 1342, 1343,  
 1421, 1422, 1450, 1451, 1504, 1544,  
 1544a, 1559, 1561a, 1581, 1608, 1649,  
 1651, 1652, 1655, 1676, 1696, 1729,  
 1800, 1870, 1876, 1947, 1979, 2013,  
 2030, 2098, 2152, 2259, 2363, 2388,  
 2425, 2448, 2478, 2600, 2609, 2761,  
 2769, 2772, 2773, 2898, 3099, 3215,  
 3292, 3348, 3374, 3542, 3570, 3574,  
 3586, 3588, 3589, 3592, 3594, 3755,  
 3783, 3814.  
 Sintered substances 1421, 1422, 2013,  
 2258, 2782.  
 Dielectric materials (barium titanate)  
 none  
 Miscellaneous crystalline solids 38,  
 47, 48, 621, 702, 813, 838, 1697,  
 1808, 1905, 1937, 2232, 2342, 2603,  
 2622, 2663, 2664, 2727, 2762, 2763,  
 2765, 2777, 2894, 2908, 3025, 3139,  
 3264, 3307, 3692, 3787, 3807, 3881.  
 Organic solids other than fibers or films  
 Rubbers 25, 440, 477, 667b, 693, 758,  
 925, 1037, 1180, 1444, 1618, 2082,  
 2315, 3027, 3292, 3507, 3509, 3531,  
 3537.  
 Miscellaneous plastics 418, 461a,  
 1598, 1772, 2283, 2284, 2355, 2647,  
 3080, 3100, 3358, 3389, 3513, 3590.  
 Carbon surfaces 1908, 1909, 3081.  
 Thin films and fibers  
 Science and technology of thin films and  
 fibers 66a, 89a, 122, 476a, 488, 667, 957,  
 1144, 1158a, 1387, 1551, 1632, 1831, 1868,  
 1869, 1887, 1888, 1889, 1897, 1933, 1946,  
 1996, 2001, 2010, 2110, 2281, 2336, 2358,  
 2453, 2694, 2726, 2874, 2924, 3303, 3333,  
 3334, 3582, 3760, 3761, 3813, 3960.  
 Structure of evaporated or sputtered films  
 (including halides) 176, 418, 479a, 591,  
 623, 707, 754, 1029, 1030, 1101, 1105,  
 1151, 1160, 1401, 1458, 1562, 1608, 1648,  
 1656, 1657, 1728, 1766, 1840, 2112, 2246,  
 2267, 2906, 3046, 3047, 3081, 3171, 3268,  
 3335, 3336, 3580, 3600, 3601, 3739, 3740,  
 3901, 3902, 4001.  
 Thin oxide films (including replicas)  
 286, 645, 704, 705, 706, 1096, 1134,  
 1559, 1561a, 1562, 1608, 2388, 2432,  
 3273, 3924, 3998, 4000, 4002.  
 Structure of thin plastic films (including  
 replicas) 13a, 39, 368, 429, 477, 624a,  
 1056, 1591, 1592, 1593, 1595, 1597, 1928,  
 1946, 2283, 2284, 2453, 2726, 2728, 3066,  
 3082, 3580, 4004.  
 Inorganic fibers 200, 984, 1868, 2607,  
 2608, 2767, 3289, 3659.  
 Plant fibers (cellulose, etc.) 35, 92,  
 122, 716, 956, 1008, 1033, 1034, 1209,  
 1212, 1213, 1361, 1644, 1698, 1700, 1727,  
 1762, 1828, 1891, 1892, 1899, 1910, 1995,  
 1996, 1997, 1998, 1999, 2000, 2001, 2010,  
 2172, 2202, 2265, 2280, 2355, 2450, 2451,  
 2506, 2507, 2522, 2523, 2723, 2724, 2877,  
 2918, 2919, 2920, 2922, 2923, 2925, 2926,  
 3053, 3054, 3109, 3110, 3120, 3121, 3395,  
 3396, 3397, 3683, 3687, 3688, 3689, 3749,  
 3760, 3761, 3795, 3796, 3842, 3959.  
 Animal fibers (wool, silk, leather, etc.)  
 122, 175, 443, 1019, 1081a, 1203, 1359,  
 1361, 1830, 1935, 1996, 2087, 2286, 2296,  
 2297, 2298, 2299, 2317, 2390, 2391, 2392,  
 2395, 2397, 2411, 2707, 2724, 2783, 2917,  
 2919, 2920, 2921, 3120, 3227, 3269, 3270,  
 3397, 3521, 3575, 3683.  
 Synthetic 476a, 693, 1591, 1632, 1644,  
 1887, 1888, 1892, 1998, 2000, 2452, 2503,  
 2724, 3053, 3397, 3512, 3597, 3683.  
 Particulate materials  
 Science and technology of particles 29, 178,  
 185, 282, 283, 293, 371, 451, 461a, 1516,  
 1642, 1721, 1747, 1874, 2066, 2341, 2357,  
 2368, 2400, 2478, 2624, 2640, 2649, 2874,  
 2939, 3024, 3099, 3101, 3203, 3528, 3530,  
 3538, 3561, 3639, 3640, 3757, 3758, 4049.  
 Soaps  
 In aqueous media 1701, 1994, 2002, 3658.  
 In non-aqueous media (lubricating greases,  
 etc.) 29, 43, 149a, 768, 1748, 1749, 1858,  
 2111, 2333, 2487, 2759, 3083, 3103, 3503,  
 3762, 3765, 3930, 3939.  
 Colloidal suspensions  
 In aqueous media (sols, gels, latices, etc.)  
 4, 41, 42, 89a, 106, 368, 426, 478, 478a,  
 535, 628, 683, 714, 932, 1100, 1301,  
 1357, 1507a, 1515, 2082, 2232, 2315, 2339,  
 2341, 2399, 2422, 2647, 2727, 2833, 2834,  
 2942, 3060, 3351, 3471, 3507, 3515, 3527,  
 3539, 3544, 3546, 3549, 3550, 3553, 3554,  
 3556, 3558, 3560, 3562, 3617, 3624, 3660,  
 3704, 3706, 3763, 3764, 3805, 3815, 4041.  
 In non-aqueous media (oils, asphalts, etc.)  
 451, 463, 721, 1206, 1696, 1747, 1870,  
 1908, 1909, 2257, 2407, 3023, 3195, 3757,  
 3758, 3764.  
 Powders artificially produced (including single  
 crystals)  
 Metallic 37, 246, 605, 917, 1021, 1182,  
 1196, 1197, 1460, 1655, 1697, 1735, 1907,  
 2042, 2250, 2339, 2368, 2382, 2476, 2478,  
 2565, 2641, 3065, 3150, 3200, 3464, 3540,  
 3561, 3810, 3902.

Non-metallic 338, 465, 528, 753, 1906,  
2371, 2372, 2373, 2418, 2645, 4050.

Aerosols (dusts and smokes) 113, 338, 620,  
631, 632, 753, 801, 802, 803, 839, 933,  
1199, 1233, 1234, 1509, 1607, 1650, 1652,  
1655, 1735, 1816, 1847, 1848, 1849, 1873,  
1874, 1938, 1948, 1949, 2025, 2063, 2066,  
2067, 2073, 2161, 2233, 2371, 2639, 2640,  
2649, 2764, 2768, 2770, 2774, 2816, 2821,  
3094, 3367, 3548, 3570, 3589, 3591, 3670,  
3899.

Pigments (other than carbon black) 429,  
721, 1870, 1946, 2099, 2100, 2313, 2601,  
2771, 2939, 3293, 3533, 3534, 3535, 3555,  
3993a.

Carbon blacks and graphite 245, 370, 440,  
944, 1035, 1036, 1180, 1400, 1401, 1673,  
1725, 2012, 2250, 2285, 2600, 3215, 3465,  
3534, 3535, 3536, 3587, 3693, 3819.

Soils and clays (silicates, asbestos, gar-  
nets, etc.) 26, 197, 198, 199, 200, 493,  
622, 658, 717, 718, 805, 832, 841, 974,  
975, 976, 1070, 1124, 1142, 1143, 1170,  
1172, 1236, 1237, 1263, 1314, 1444, 1506,  
1701, 1718, 1719, 1720, 1722, 1734, 1808,  
1848, 1900, 1964, 1980, 2003, 2019, 2060,  
2061, 2263, 2343, 2344, 2399, 2432, 2541,  
2553, 2554, 2605, 2606, 2763, 2765, 2776,  
2800, 2837, 2899, 2900, 2901, 2902, 2903,  
2904, 3026, 3192, 3261, 3384, 3388, 3516,  
3517, 3519, 3520, 3551, 3569, 3705, 3857,  
3887, 3963, 3964.

Catalysts 29, 528, 983, 1262, 1884, 2258,  
2736, 3705.

Minerals 64, 250, 291, 292, 323, 658, 975,  
1849, 2070, 2604, 2642, 2762, 2766, 2775,  
2939, 3193, 3518, 3540, 3766, 3786.

Physical properties and reactions of solids

Growth spirals 48, 97, 715, 812, 819, 909,  
1905, 1928, 2034, 2486, 3574.

Photographic processes 178, 1229, 1394,  
1515, 1716, 1839, 1985, 2256, 2559, 2797,  
3626, 3681, 3682, 3684, 3686.

Thermionic and photoelectric emission and  
photo-conductance 565, 977, 1105, 1106,  
1579, 2434, 3739.

Structure after plastic distortion, cold  
work, etc. 568, 637, 700, 757, 842, 843,  
1086, 1261, 1932, 2600, 2602, 2617, 2618,  
2638, 3654, 3655, 3690, 3875, 3883, 3928,  
3929, 3997.

Friction studies, abrasion and wear, surface  
flow during polishing 253, 566, 578, 583,  
1111, 1504, 2250, 2907, 3227, 3596.

Absorption studies 244, 292, 1615, 1947,  
2017, 2099, 2100, 3263.

Chemical reactions (precipitation, etc.,  
nucleation and growth) 4, 33, 106, 246,  
262, 379a, 462, 674, 706, 723, 1096, 1097,  
1153, 1157, 1158, 1171, 1367, 1389, 1636,  
1694, 1695, 1696, 1716, 1717, 1842, 1980,  
2259, 2339, 2405, 2443, 2565, 2644, 2647,  
2708, 2767, 2773, 2841, 2902, 2906, 3009,  
3065, 3179, 3199, 3203, 3217, 3368, 3471,  
3540, 3541, 3543, 3545, 3546, 3547, 3561,  
3562, 3595, 3659, 3662, 3684, 3786, 3808,  
3818, 3851, 3929, 4004.

Artifacts 170, 749, 864, 1033, 1472, 1756,  
2033, 2778, 4024.









